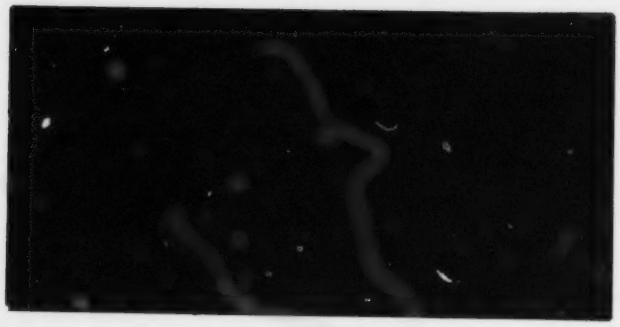
Government of Saskatchewan

Science and Technology



92-05978/

SCIENTIFIC ACTIVITIES OF THE GOVERNMENT OF SASKATCHEWAN 1990-91 SURVEY RESULTS

A REPORT PREPARED BY:

Lloyd Lizotte
Science and Technology Section
Services, Science and Technology Division
Statistics Canada

February 1992

FOREWORD

This report presents a summary of results of the annual survey of scientific activities of the Government of Saskatchewan. The survey was conducted by Statistics Canada under contract to the Saskatchewan Department of Economic Diversification and Trade. The field work was conducted by Lloyd Lizotte of Statistics Canada assisted by Royal Hinther of the Saskatchewan Department of Economic Diversification and Trade.

This survey is now conducted for all provinces except Prince Edward Island and the Yukon and Northwest Territories. Similar reports for other provinces, are available on request from the provincial Ministry sponsoring the survey. A list of the provincial co-ordinators is provided at the end of this report. Statistics Canada will also make available a summary report including a historical account of all scientific data available at the provincial government level.

Science surveys, like many other surveys, are based on the respondents' interpretation of definitions and methods of calculation. The accounting records available rarely use a science-based classification. Although the data are estimates, they still provide a good representation of the current science expenditures and manpower for the province of Saskatchewan.

The information produced in this report can assist decision makers in the organizations involved to coordinate their science activities and deploy their resources more effectively. It assists provincial S&T policy makers to evaluate current science policy and enables them to develop new policies. Statistics Canada uses the data as input for the development of a national aggregate research and development series. National aggregates are published by Statistics Canada in **Indicators of Science and Technology**, (Catalogue No. 88-002 Vol. 2 No. 2). The national aggregates are also needed to complete the international questionnaires for the Organization for Economic Cooperation and Development (OECD) and the United Nations Education, Science and Culture Organization (UNESCO).

The goodwill and efforts of the officials of the responding departments contributed greatly to the success of the survey. The assistance provided by the Department of Economic Diversification and Trade is gratefully acknowledged.

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by Activity	1	13	23	40	45	57
by Department or Agency	2	14	24	41	46	58
by Performing Sector	3	15	25	41	47	59
Total Expenditures on R&D:						
by Performing Sector	4	15	26	42	48	59
by Department or Agency	5	16	27	42	49	59
Personnel Engaged in Scientific Activities, by Activity and Category	6	17	28	43	50	60
Expenditures in 1990-91 Fiscal Year:						
Total Expenditures:						
by Sources of Funds	7	18	29	44	51	61
by Activity and Performing Sector	8	19	30	44	32	61
by Department or Agency and Performing Sector	9	20	31	45	53	62
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by Activity and Performing Sector	16	30	38	51	60	68
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by Department or Agency and Activity	18	32	40	52	62	69
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The following symbols are used in this report:

- nil or zero
... figures are not appropriate or not applicable
e estimated figures
-- amount too small to be expressed
(r) revised figures

Note to Readers:

In this report the scientific expenditures of the Saskatchewan Research Council reflect only the yearly grant from the Saskatchewan Government (Vote 35). Additional information on the SRC is available in Science Statistics, Catalogue No. 88-001, Vol. 15, No. 9.

DEFINITIONS

This report covers those scientific and technological activities which involve the generation, dissemination and application of new scientific and technological knowledge. The central activity is **research and experimental development (R&D)**. In addition, there are a number of activities closely related to R&D and are referred to as the related scientific activities (RSA).

R&D is creative work undertaken on a systematic basis in order to increase the stock of scientific and technical knowledge as well as knowledge of humans, their culture and society; and the use of this knowledge to devise new applications. The central characteristic of R&D is an appreciable element of novelty and uncertainty. It requires the acquisition of knowledge and not just information. New knowledge involves the integration of newly acquired information into existing hypotheses, the formulation and testing of new hypotheses or the re-evaluation of existing observations.

The major **related scientific activities** are education support, technical surveys, statistical surveys, information services, special services and studies, and museum services. Education support, and museum services are largely self-explanatory.

Technical surveys are activities directed towards the exploration and systematic description of the earth and its natural resources. The activities include gathering, processing, collating and analyzing of data on natural phenomena except when part of a research project or a museum service. The preparation of maps and survey reports, their printing and cataloguing, are also included.

Statistical surveys are activities directed towards the collecting, processing and disseminating of statistics on humankind, their economic and social activities. Included are the development of technical methodology, statistical analysis and vital statistics.

Information services are activities directed to recording, classifying, translating, and disseminating scientific and technological information **(Technology Transfer)**as well as information resulting from R&D in the social sciences or required in support of such R&D. Included are the operations of scientific and technical libraries, specialized libraries and archives, the publication of scientific journals and bibliographies, and the organizing of scientific conferences. Grants for the publication of scholarly works are also included.

Special services and studies in the natural sciences are activities directed towards the establishment of national and provincial standards for materials, devices, products and processes; the calibration of secondary standards; non-routine quality testing; feasibility studies and demonstration projects. In the social sciences, special services and studies are systematic investigations carried out in order to provide information needed for planning or policy formulation, including feasibility studies, and demonstration projects.

There are also two different science types that are identified by this survey, the natural sciences and the social sciences and humanities.

Natural sciences consist of disciplines concerned with understanding, exploring, developing or utilizing the natural world. Included are the engineering, mathematical, environmental, life and physical sciences.

Social sciences and humanities include all disciplines involving the study of human actions and conditions and the social, economic and institutional mechanisms affecting humans. Included are such disciplines as anthropology, business administration and commerce, communications, criminology, demography, economics, geography, history, languages, literature and linguistics, law, library services, philosophy, political sciences, psychology, religious studies, social work, sociology and urban and regional studies.

Five **performing sectors** are identified besides the Saskatchewan Research Council. **Intramural** refers to units of the provincial government performing scientific activities with their own funds. **Industry** consists largely of private corporations but also includes crown corporations with a commercial function (e.g. power utilities) and industrial research institutes not controlled by another institution. Consultants providing scientific and engineering services are also included. **Universities** cover post-secondary educational institutions and affiliated teaching and research facilities. Also included are industrial research institutes affiliated with a university. **Hospitals and health organizations** are health organizations such as the Heart Foundation and hospitals which do not belong to the universities sector. **Other** includes non-resident performers of scientific activities funded by the provincial government, as well as recipients not covered elsewhere such as the federal government, other provincial departments, and individuals and foreign.

Expenditures are either current or capital. **Current expenditures** include costs of personnel, transportation and communications, information, professional and special services, rentals, purchased repair and upkeep, utilities, materials and supplies. **Capital expenditures** are those for the construction and acquisition of land, buildings, machinery and equipment. **Total expenditures** comprise current plus capital expenditures.

Departmental Personnel data are requested by activity and category of employment in person-years or full-time equivalent. A person totally working full-time on a scientific activity is counted one person-year. Those working only part-time on scientific activities are considered as a fraction of a person-year, according to their involvement. Both permanent and non-permanent employees are included.

Objectives of expenditures are requested by activity and performer (intramural and extramural). The objectives listed are intended to cover the major areas of current economic, political and technological interest. Data are to be reported under the objective which is primary to that expenditure. Generally, the objective selected should be consistent with the stated objectives of the reporting department.

HIGHLIGHTS

Approximately 1.5% of the estimated 1990-91 budgetary expenditures of the government of Saskatchewan was spent on scientific activities. Total government expenditures for 1991-92 are estimated to increase by 4% , while scientific expenditures are estimated to decrease by 15%. (see Text Table I)

Of the total 1990-91 science expenditures, 78% ($55.6 million) are for natural science activities. Research and Development (R&D) account for $34.1 million (61%) of this amount. The remaining $21.5 million is spent on related scientific activities (RSA). Major support of research comes from the departments of Agriculture and Food, Health and Economic Diversification and Trade as well as the Saskatchewan Research Council. Technical surveys activity is the major related scientific activity, supported mainly by the departments of Saskatchewan Crop Insurance Corporation and Saskatchewan Property Management Corporation. (see Text Table II)

Social science activities account for 22% ($15.4 million) of the total 1990-91 Saskatchewan government science expenditures. Eighty-five percent of this is spent on related scientific activities. The departments of Education, Finance, Health, and Agriculture and Food are the major supporters of social science activities. (see Text Table II)

The provincial government itself performed 28% of the scientific activities in 1990-91. Most of the RSA funded by the provincial government is performed in-house. However, only 11% of the R&D is performed by the government itself. This year the industry sector is the largest extramural performer (37%) followed by the university sector (14%). (see Text Table III)

The primary source of funds is the provincial departmental budgets, accounting for 92% of total science expenditures. (see Text Table IV)

Of the total Saskatchewan government employees, 360 person-years are devoted to science activities. The scientific and professional category accounts for 49%, while technical personnel constitute 33% and other support staff the remaining 18%. (see Text Table V)

Fifty-Two percent of the money spent on natural science activities in 1990-91 was applied to the areas of Industrial and economic development - Agriculture and Manufacturing. The major objective in the social sciences is Social Development ($8.2 million). Overall, $26.0 million was directed to Agriculture, $8.4 million to Health, $2.7 million to Transportation, $16.7 million to Industrial and economic development (excluding Agriculture), $9.0 million to Social development, $5.6 million to Environmental issues and $1.1 million to Energy and fuels. (see Text Table VI)

TEXT TABLE I. Scientific Activities of the Government of Saskatchewan

Department or agency	1990-91			1991-92(e)		
	Estimated expenditures	Scientific expenditures	%	Estimated expenditures	Scientific expenditures	%
	in millions of dollars		%	in millions of dollars		%
Agriculture and Food	163.0	22.0	13.5	251.9	18.3	7.3
Economic Diversification and Trade	27.1	4.7	17.3	26.3	4.1	15.6
Education	879.8	2.8	0.3	903.9	1.2	0.1
Energy and Mines	13.3	2.4	18.0	11.6	1.6	13.8
Health	1,507.3	7.5	0.5	1,597.7	7.2	0.5
Highways and Transportation	226.1	2.7	1.2	210.4	2.7	1.3
Parks and Renewable Resources	73.6	2.9	3.9	84.5	2.7	3.2
Sub-total	2,890.2	45.0	1.6	3,086.3	37.8	1.2
Other (1)	1,730.5	26.0	1.5	1,713.3	23.3	1.4
Total	**4,620.7**	**71.0**	**1.5**	**4,799.6**	**61.1**	**1.3**

(1) Includes Vote 35 (Grant to the Saskatchewan Research Council).

TEXT TABLE II. Total Expenditures on Scientific Activities, by Science Type, 1984-85 to 1991-92(e)

Science type	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Natural (1)	25,686	27,470	36,846	38,084	34,218	43,242	55,588	47,287
Social	16,936	19,113	16,580	9,057	10,108	15,334	15,393	13,803
Total	**42,622**	**46,583**	**53,426**	**47,141**	**44,326**	**58,576**	**70,981**	**61,090**

(1) Includes Vote 35 (Grant to the Saskatchewan Research Council).

TEXT TABLE III. Total Expenditures on Scientific Activities, by Sector of Performance , 1990-91

Activity	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
R&D	3,954	15,112	8,112	703	6,057	2,421	36,359
RSA	16,057	11,028	2,107	30	126	5,274	34,622
TOTAL	**20,011**	**26,140**	**10,219**	**733**	**6,183**	**7,695**	**70,981**

(1) Includes only Provincial Government payments to the Saskatchewan Research Council (SRC).

TEXT TABLE IV. Total Expenditures on Scientific Activities, by Source of Funds, 1990-91

Department or agency	Departmental budget	Transfers from other departments	Transfers from federal government	From trust funds	From other sources	Total
	in thousands of dollars					
Agriculture and Food....	20,522	-	-	1,438	-	21,960
Economic Diversification and Trade.....	4,701	-	18	-	-	4,719
Education.....	2,848	-	-	-	-	2,848
Energy and Mines.....	2,285	134	-	-	-	2,419
Health.....	7,512	-	10	-	-	7,522
Highways and Transportation	2,693	-	-	-	-	2,693
Parks and Renewable Resources.....	2,490	-	-	300	118	2,908
Other.....	22,574	312	776	-	2,250	25,912
TOTAL.....	**65,625**	**446**	**804**	**1,738**	**2,368**	**70,981**

TEXT TABLE V. Personnel Engaged in Scientific Activities, by Science Type, Activity and Category, 1990-91

Science type and activity	Scientific & professional		Technical		Other		Total	
	Number	%	Number	%	Number	%	Number	%
Natural Sciences:								
R&D	17	32	33	61	4	7	54	100
RSA	49	35	66	48	23	17	138	100
AEP (1)	16	55	7	24	6	21	29	100
Sub-total	82	37	106	48	33	15	221	100
Social Sciences:								
R&D	2	100	-	-	-	-	2	100
RSA	93	68	13	10	30	22	136	100
AEP (1)	1	100	-	-	-	-	1	100
Sub-total	96	69	13	9	30	22	139	100
TOTAL	178	49	119	33	63	18	360	100

(1) Administration of extramural programs.

TEXT TABLE VI. Objectives of Total Science Expenditures 1990-91 and 1991-92

Objective	1990-91		1991-92(e)	
	($'000)	%	($'000)	%
Advancement of science	500	1	507	1
Communications	-	-	-	-
Energy and fuels:				
Conservation	-	-	-	-
Fossil fuels	764	1	100	--
Renewable Resources	-	-	-	-
Other	361	--	376	1
Environmental issues:				
Air	90	--	-	-
Land	871	1	946	2
Water	3,287	5	2,840	5
Other	1,352	2	1,185	2
Health	8,372	12	7,846	13
Industrial and economic development:				
Agriculture	25,977	37	22,617	37
Fisheries	310	--	310	1
Forestry	1,447	2	1,447	2
Manufacturing	5,372	7	4,880	8
Minerals	2,763	4	2,613	4
Other	6,770	10	4,434	7
Social development:				
Culture, sport and recreation	2,630	4	2,635	4
Education	2,848	4	1,204	2
Human resources	586	1	283	--
Urban and regional studies	402	--	531	1
Other	2,558	4	2,593	4
Transportation	2,718	4	2,968	5
Wildlife	1,003	1	775	1
Other	-	-	-	-
TOTAL	**70,981**	**100**	**61,090**	**100**

TABLE 1. Total Expenditures by Activity, 1984-85 to 1991-92

Activity	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Research and development (R&D)								
Current expenditures:								
In-house R&D	2,663	2,696	3,392	1,682	2,286	1,430	2,200	1,902
R&D contracts	4,265	6,819	6,225	4,256	2,811	3,256	3,399	2,883
R&D grants and contributions	11,086	8,130	14,401	18,777	16,434	23,489	28,660	23,313
Research fellowships	92	281	349	208	307	204	384	400
Admin of extramural R&D programs	...	...	...	857	1,076	1,266	1,567	1,380
Sub-total current R&D	18,106	17,926	24,367	25,780	22,914	29,645	36,210	29,878
Capital expenditures	167	221	249	243	51	54	149	80
Total R&D	18,273	18,147	24,616	26,023	22,965	29,699	36,359	29,958
Related scientific activities (RSA)								
Current expenditures	23,680	28,386	28,773	20,753	20,427	25,724	33,891	30,036
Admin of extramural RSA programs	...	...	...	340	365	865	512	231
Sub-total current RSA	23,680	28,386	28,773	21,093	20,792	26,589	34,403	30,267
Capital expenditures	669	50	37	25	569	2,288	219	865
Total RSA	24,349	28,436	28,810	21,118	21,361	28,877	34,622	31,132
Total	42,622	46,583	53,426	47,141	44,326	58,576	70,981	61,090

TABLE 2. Total Expenditures by Department or Agency, 1984-85 to 1991-92

Department or agency	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Departments:								
Advanced Education and Manpower	1,328	2,538	3,608	...	...	...	...	...
Agriculture and Food	6,613	5,911	12,549	12,518	11,386	14,400	21,960	18,290
Community Services	...	...	...	...	...	...	377	531
Consumer and Commercial Affairs	295	50	40	40	40	40	...	...
Co-operation & Co-operative Devlpt.	224	232	132	...	...	...	...	...
Culture, Multiculturalism & Recreation	...	...	...	...	...	2,326	...	...
Culture and Recreation	464	507	586	..	...	...	...	...
Economic Development & Trade	647	756	...	...	...	...	...	...
Economic Development and Tourism	...	...	...	234	775	737	...	...
Economic Diversification and Trade	...	...	...	...	...	...	4,719	4,070
Education	200	322	231	725	1092	3,460	2,848	1,204
Energy and Mines	4,274	3,437	5,422	5,380	1,701	2,651	2,419	1,559
Environment	755	1,773	1,273	...	...	...	...	...
Environment and Public Safety	...	...	...	1,726	1,605	1,563	1,745	1,525
Executive Council	538	465	278	194	166	122	57	61
Family Foundation	...	...	...	...	...	...	1,649	942
Finance	1,052	1,132	1,501	1,762	1,676	1,679	2,048	2,048
Future Corporation	...	...	...	...	...	1,720	...	...
Health	5,532	5,612	4,687	4,163	3,645	6,438	7,522	7,213
Highways and Transportation	1,628	2,412	3,083	3,298	3,220	2,638	2,693	2,705
Human Resources, Labour & Employment	...	...	...	316	429	800	487	416
Indian & Native Affairs Sec.	205	307	262	...	...	...	...	...
Justice	1,495	2,226	383	180	135	258	173	175
Labour	212	278	509	...	...	...	...	...
Parks and Renewable Resources	1,409	1,362	1,362	...	...	2,751	2,908	2,715
Parks, Recreation and Culture	...	...	...	1,995	5,207	...	...	...
Public Service Commission	202	215	112	66	66	125	69	70
Revenue & Financial Services	102	228	373	...	...	...	...	...
Rural Development	264	249	311	295	265	326	233	295
Saskatchewan Library	30	112	148	...	...	...	...	...
Saskatchewan Telephones	...	...	16	...	...	...	...	...
Science and Technology	2,477	3,992	4,487	3,996	4,028	5,117	...	...
Social Services	2,892	3,757	3,220	1,428	383	129	183	70
Supply and Services	1,954	769	610	...	...	...	...	...
Tourism and Small Business	264	180	338	...	...	...	...	...
Urban Affairs	785	415	437	182	128	127	...	...
Womens Secretariat	38	30	24	...	...	...	...	...
Vote 35	4,106	4,081	4,081	6,443	6,042	7,336	5,736	5,975
Sub-total	39,985	43,348	50,063	44,941	41,989	54,743	57,826	49,864
Agencies:								
Cancer Foundation	407	447	434	393	379	398	647	430
Employment Development Agency	...	379	562	...	...	...	...	...
Highway Traffic Board	84	84	...	...	...	...	...	...
Sask. Archives Board	920	1,102	1,023	883	1,027	1,053	1,083	1,898
Sask. Assessment Management Agency	53	55	13	...	...	...	...	...
Sask. Crop Insurance Corp.	100	150	150	155	155	135	3,272	3,307
Sask. Housing Corporation	318	234	181	194	129	206	...	...
Sask. Property Management Corp.	...	...	...	555	635	780	5,408	3,100
Sask. Water Corporation	755	784	1,000	20	12	1,261	2,745	2,491
Sub-total	2,637	3,235	3,363	2,200	2,337	3,833	13,155	11,226
Total	42,622	46,583	53,426	47,141	44,326	58,576	70,981	61,090

TABLE 3. Total Expenditures by Performing Sector, 1984-85 to 1991-92

Performing sector	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Intramural	20,575	20,921	21,871	15,425	18,693	20,195	20,011	18,712
Industry	7,666	9,900	11,384	10,525	7,766	13,527	26,140	17,310
Universities	7,032	6,612	10,031	9,345	9,246	11,032	10,219	11,379
Hospitals and health organizations	886	986	369	0	58	512	733	432
Sask. Research Council (1)	4,460	6,971	7,429	7,945	6,378	7,998	6,183	6,052
Other	2,003	1,193	2,342	3,901	2,135	5,312	7,695	7,205
Total	42,622	46,583	53,426	47,141	44,326	58,576	70,981	61,090

(1) Includes only annual funding by the Provincial Government.

TABLE 4. Total Expenditures on R&D by Performing Sector, 1984-85 to 1991-92

Performing sector	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Intramural	3,265	3,272	3,898	2,877	3,445	2,935	3,954	3,393
Industry	3,604	2,630	5,044	4,292	3,837	7,164	15,112	8,137
Universities	5,796	4,332	7,128	7,998	7,826	9,292	8,112	10,068
Hospitals and health organizations	886	986	361	0	58	100	703	432
Sask. Research Council (1)	4,315	6,649	7,321	7,883	6,265	7,791	6,057	6,005
Other	407	278	864	2,973	1,534	2,417	2,421	1,923
Total	18,273	18,147	24,616	26,023	22,965	29,699	36,359	29,958

(1) Includes only annual funding by the Provincial Government.

TABLE 5. Total Expenditures on R&D, by Department or Agency, 1984-85 to 1991-92

Department or agency	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Departments:								
Agriculture and Food	4,989	4,196	9,065	9,977	8,452	11,365	18,374	13,213
Community Services	...	...	...	...	...	...	103	191
Culture, Multiculturalism & Recreation	...	...	...	...	...	528	...	...
Culture and Recreation	36	40	145	...	...	...	...	...
Economic Development and Tourism	...	...	...	...	478	535	...	...
Economic Diversification and Trade	...	...	...	...	...	...	3,864	3,507
Education	...	...	...	...	63	226	78	34
Energy and Mines	3,378	2,665	3,063	1,729	300	501	22	3
Environment	55	220	274	...	...	...	...	...
Environment and Public Safety	...	...	...	200	200	300	290	-
Executive Council	181	142	80	82	44	-	-	-
Family Foundation	...	...	...	...	...	...	180	63
Finance	...	...	...	...	...	...	...	...
Future Corporation	...	...	...	...	...	323	...	...
Health	2,961	3,194	3,177	2,684	2,219	4,247	4,746	4,431
Highways and Transportation	225	612	1,072	1,096	770	658	938	950
Parks and Renewable Resources	621	806	643	...	...	776	894	794
Parks, Recreation and Culture	...	...	...	700	925	...	...	...
Rural Development	...	...	...	...	...	90	-	-
Saskatchewan Library	...	19	74	...	...	...	...	...
Science and Technology	986	1,444	2,222	2,514	2,598	2,216	...	...
Social Services	141	144	113	115	298	-	-	-
Supply and Services	102	72	50	...	...	...	...	...
Vote 35	4,106	4,081	4,081	6,443	6,042	7,336	5,736	5,975
Sub-total	17,781	17,635	24,059	25,540	22,389	29,101	35,425	29,161
Agencies:								
Cancer Foundation	407	447	434	393	379	398	647	430
Sask. Crop Insurance Corp.	5	5	5	20	20	-	7	7
Sask. Property Management Corp.	...	...	...	50	165	200	280	360
Sask. Water Corporation	80	60	118	20	12	...	...	...
Sub-total	492	512	557	483	576	598	934	797
Total	18,273	18,147	24,616	26,023	22,965	29,699	36,359	29,958

TABLE 6. Personnel Engaged in Scientific Activities by Activity and Category, 1984-85 to 1991-92

Activity and category	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	person-years							
Research and development								
Scientific and professional	42	32	47	25	27	13	19	18
Technical	42	43	44	18	30	23	33	24
Other	8	5	5	1	1	1	4	4
Sub-total R&D personnel	92	80	96	44	58	37	56	46
Related scientific activities								
Scientific and professional	206	243	206	133	128	133	142	135
Technical	85	97	72	56	82	63	79	70
Other	91	96	53	47	58	64	53	60
Sub-total RSA personnel	382	436	331	236	268	260	274	265
Administration of extramural programs								
Scientific and professional	...	...	...	14	16	21	17	16
Technical	...	...	...	3	2	6	7	6
Other	...	...	...	4	6	15	6	6
Sub-total AEP personnel	...	...	...	21	24	42	30	28
Total science activities								
Scientific and professional	248	275	253	172	171	167	178	169
Technical	127	140	116	77	114	92	119	100
Other	99	101	58	52	65	80	63	70
Total scientific personnel	474	516	427	301	350	339	360	339

NOTE: Although 1987-88 is the first year that person-years devoted to the administration of extramural programs are being shown separately, these personnel have been included in the past, in most cases, under the activity being administered.

TABLE 7. Total Expenditures by Department or Agency and Source of Funds, 1990-91

Department or agency	Departmental budget	Transfers from other Departments	Transfers from federal government	From trust funds	From other sources	Total
	in thousands of dollars					
Departments:						
Agriculture and Food	20,522	-	-	1,438	-	21,960
Community Services	377	-	-	-	-	377
Economic Diversification and Trade	4,701	-	18	-	-	4,719
Education	2,848	-	-	-	-	2,848
Energy and Mines	2,285	134	-	-	-	2,419
Environment and Public Safety	1,745	-	-	-	-	1,745
Executive Council	57	-	-	-	-	57
Family Foundation	1,526	-	13	-	110	1,649
Finance	2,048	-	-	-	-	2,048
Health	7,512	-	10	-	-	7,522
Highways and Transportation	2,693	-	-	-	-	2,693
Human Resources, Labour & Employment	487	-	-	-	-	487
Justice	173	-	-	-	-	173
Parks and Renewable Resources	2,490	-	-	300	118	2,908
Public Service Commission	69	-	-	-	-	69
Rural Development	233	-	-	-	-	233
Social Services	95	38	50	-	-	183
Vote 35	5,736	-	-	-	-	5,736
Sub-total	55,597	172	91	1,738	228	57,826
Agencies:						
Cancer Foundation	647	-	-	-	-	647
Sask. Archives Board	862	44	37	-	140	1,083
Sask. Crop Insurance Corp.	3,272	-	-	-	-	3,272
Sask. Property Management Corp.	3,178	230	-	-	2,000	5,408
Sask. Water Corporation	2,069	-	676	-	-	2,745
Sub-total	10,028	274	713	-	2,140	13,155
Total	65,625	446	804	1,738	2,368	70,981

TABLE 8. Total Expenditures by Activity and Performing Sector, 1990-91

Activity	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council(1)	Other	Total
	in thousands of dollars						
Research and development (R&D)							
Current expenditures:							
In-house R&D	2,200	...	...	...	...	...	2,200
R&D contracts	38	2,496	616	-	90	159	3,399
R&D grants and contributions	...	12,616	7,112	703	5,967	2,262	28,660
Research fellowships	-	-	384	-	-	-	384
Admin of extramural R&D programs	1,567	...	...	...	...	...	1,567
Sub-total current R&D	3,805	15,112	8,112	703	6,057	2,421	36,210
Capital expenditures	149	...	...	...	...	...	149
Total R&D	3,954	15,112	8,112	703	6,057	2,421	36,359
Related scientific activities (RSA)							
Current expenditures	15,326	11,028	2,107	30	126	5,274	33,891
Admin of extramural RSA programs	512	...	...	...	...	...	512
Sub-total current RSA	15,838	11,028	2,107	30	126	5,274	34,403
Capital expenditures	219	...	...	...	...	...	219
Total RSA	16,057	11,028	2,107	30	126	5,274	34,622
Total	20,011	26,140	10,219	733	6,183	7,695	70,981

(1) Includes only annual funding by the Provincial Government.

TABLE 9. Total Expenditures by Department or Agency and Performing Sector, 1990-91

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council(1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	504	13,754	5,654	-	231	1,817	21,960
Community Services	265	63	24	25	-	-	377
Economic Diversification and Trade	1,683	2,269	590	-	25	152	4,719
Education	369	2,470	-	-	-	9	2,848
Energy and Mines	1,566	588	167	-	45	53	2,419
Environment and Public Safety	1,375	22	250	-	98	-	1,745
Executive Council	-	-	-	-	-	57	57
Family Foundation	1,545	100	-	-	-	4	1,649
Finance	2,048	-	-	-	-	-	2,048
Health	2,185	82	3,047	708	-	1,500	7,522
Highways and Transportation	2,430	191	22	-	-	50	2,693
Human Resources, Labour & Employment	284	-	-	-	-	203	487
Justice	173	-	-	-	-	-	173
Parks and Renewable Resources	2,848	40	3	-	5	12	2,908
Public Service Commission	69	-	-	-	-	-	69
Rural Development	37	196	-	-	-	-	233
Social Services	59	59	65	-	-	-	183
Vote 35	-	-	-	-	5,736	-	5,736
Sub-total	17,440	19,834	9,822	733	6,140	3,857	57,826
Agencies:							
Cancer Foundation	647	-	-	-	-	-	647
Sask. Archives Board	1,083	-	-	-	-	-	1,083
Sask. Crop Insurance Corp.	197	-	-	-	-	3,075	3,272
Sask. Property Management Corp.	388	4,990	30	-	-	-	5,408
Sask. Water Corporation	256	1,316	367	-	43	763	2,745
Sub-total	2,571	6,306	397	-	43	3,838	13,155
Total	20,011	26,140	10,219	733	6,183	7,695	70,981

(1) Includes only annual funding by the Provincial Government.

TABLE 10. Total Expenditures by Department or Agency and Activity, 1990-91

Department or agency	Research and development			Related scientific activities			Total
	Current	AEP(1)	Capital	Current	AEP(1)	Capital	
	in thousands of dollars						
Departments:							
Agriculture and Food	18,318	256	-	3,386	-	-	21,960
Community Services	92	11	-	274	-	-	377
Economic Diversification and Trade	2,667	1,197	-	691	164	-	4,719
Education	78	-	-	2,650	120	-	2,848
Energy and Mines	22	-	-	2,212	-	185	2,419
Environment and Public Safety	290	-	-	1,455	-	-	1,745
Executive Council	-	-	-	57	-	-	57
Family Foundation	180	-	-	1,469	-	-	1,649
Finance	-	-	-	2,048	-	-	2,048
Health	4,746	-	-	2,776	-	-	7,522
Highways and Transportation	838	60	40	1,755	-	-	2,693
Human Resources, Labour & Employment	-	-	-	487	-	-	487
Justice	-	-	-	173	-	-	173
Parks and Renewable Resources	881	13	-	2,005	-	9	2,908
Public Service Commission	-	-	-	69	-	-	69
Rural Development	-	-	-	233	-	-	233
Social Services	-	-	-	183	-	-	183
Vote 35	5,736	-	-	-	-	-	5,736
Sub-total	33,848	1,537	40	21,923	284	194	57,826
Agencies:							
Cancer Foundation	538	-	109	-	-	-	647
Sask. Archives Board	-	-	-	1,083	-	-	1,083
Sask. Crop Insurance Corp.	7	-	-	3,265	-	-	3,272
Sask. Property Management Corp.	250	30	-	4,875	228	25	5,408
Sask. Water Corporation	-	-	-	2,745	-	-	2,745
Sub-total	795	30	109	11,968	228	25	13,155
Total	34,643	1,567	149	33,891	512	219	70,981

(1) Administration of extramural programs.

TABLE 11. Total Expenditures on R&D by Department or Agency and Performing Sector, 1990-91

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council(1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	256	12,548	4,798	-	231	741	18,574
Community Services	11	43	24	25	-	-	103
Economic Diversification and Trade	1,197	2,000	550	-	-	117	3,864
Education	69	-	-	-	-	9	78
Energy and Mines	8	-	14	-	-	-	22
Environment and Public Safety	-	-	200	-	90	-	290
Executive Council	-	-	-	-	-	-	-
Family Foundation	76	100	-	-	-	4	180
Finance	-	-	-	-	-	-	-
Health	94	-	2,474	678	-	1,500	4,746
Highways and Transportation	675	191	22	-	-	50	938
Human Resources, Labour & Employment	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-
Parks and Renewable Resources	854	40	-	-	-	-	894
Public Service Commission	-	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-
Vote 35	-	-	-	-	5,736	-	5,736
Sub-total	3,240	14,922	8,082	703	6,057	2,421	35,425
Agencies:							
Cancer Foundation	647	-	-	-	-	-	647
Sask. Archives Board	-	-	-	-	-	-	-
Sask. Crop Insurance Corp.	7	-	-	-	-	-	7
Sask. Property Management Corp.	60	190	30	-	-	-	280
Sask. Water Corporation	-	-	-	-	-	-	-
Sub-total	714	190	30	-	-	-	934
Total	3,954	15,112	8,112	703	6,057	2,421	36,359

(1) Includes only annual funding by the Provincial Government.

TABLE 12. Intramural Expenditures by Department or Agency and Type of Expenditure, 1990-91

Department or agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
	in thousands of dollars			
Departments:				
Agriculture and Food	490	14	-	504
Community Services	237	28	-	265
Economic Diversification and Trade	758	925	-	1,683
Education	358	11	-	369
Energy and Mines	900	481	185	1,566
Environment and Public Safety	960	415	-	1,375
Executive Council	-	-	-	-
Family Foundation	930	615	-	1,545
Finance	1,741	307	-	2,048
Health	1,307	878	-	2,185
Highways and Transportation	1,738	652	40	2,430
Human Resources, Labour & Employment	200	84	-	284
Justice	173	-	-	173
Parks and Renewable Resources	1,978	861	9	2,848
Public Service Commission	69	-	-	69
Rural Development	19	18	-	37
Social Services	59	-	-	59
Sub total	11,917	5,289	234	17,440
Agencies:				
Cancer Foundation	421	117	109	647
Sask. Archives Board	812	271	-	1,083
Sask. Crop Insurance Corp.	142	55	-	197
Sask. Property Management Corp.	338	25	25	388
Sask. Water Corporation	256	-	-	256
Sub-total	1,969	468	134	2,571
Total	13,886	5,757	368	20,011

TABLE 13. Personnel Engaged in Scientific Activities by Department or Agency and Activity, 1990-91

Department or agency	Research and development				Related scientific activities			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	-	-	-	-	5	4	-	9
Community Services	-	-	-	-	5	-	-	5
Economic Diversification and Trade	-	-	-	-	3	-	-	3
Education	2	-	-	2	4	2	-	6
Energy and Mines	-	-	-	-	14	-	6	20
Environment and Public Safety	-	-	-	-	5	11	-	16
Executive Council	-	-	-	-	-	-	-	-
Family Foundation	1	-	-	1	12	5	8	25
Finance	-	-	-	-	29	-	6	35
Health	-	2	1	3	21	10	3	34
Highways and Transportation	5	6	1	12	7	13	10	30
Human Resources, Labour & Employment	-	-	-	-	4	-	1	5
Justice	-	-	-	-	3	-	-	3
Parks and Renewable Resources	10	5	2	17	8	29	2	39
Public Service Commission	-	-	-	-	1	-	-	1
Rural Development	-	-	-	-	-	1	-	1
Social Services	-	-	-	-	1	1	-	2
Sub-total	18	13	4	35	122	76	36	234
Agencies:								
Cancer Foundation	-	20	-	20	-	-	-	-
Sask. Archives Board	-	-	-	-	14	-	15	29
Sask. Crop Insurance Corp.	-	-	-	-	2	1	2	5
Sask. Property Management Corp.	1	-	-	1	1	2	-	3
Sask. Water Corporation	-	-	-	-	3	-	-	3
Sub-total	1	20	-	21	20	3	17	40
Total	19	33	4	56	142	79	53	274

TABLE 13. Personnel Engaged in Scientific Activities by Department or Agency and Activity, 1990-91 - Concluded

Department or agency	Administration of extramural programs				Total scientific personnel			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	3	3	2	8	8	7	2	17
Community Services	-	-	-	-	5	-	-	5
Economic Diversification and Trade	11	-	4	15	14	-	4	18
Education	1	-	-	1	7	2	-	9
Energy and Mines	-	-	-	-	14	-	6	20
Environment and Public Safety	-	-	-	-	5	11	-	16
Executive Council	-	-	-	-	-	-	-	-
Family Foundation	-	-	-	-	13	5	8	26
Finance	-	-	-	-	29	-	6	35
Health	-	-	-	-	21	12	4	37
Highways and Transportation	1	-	-	1	13	19	11	43
Human Resources, Labour & Employment	-	-	-	-	4	-	1	5
Justice	-	-	-	-	3	-	-	3
Parks and Renewable Resources	-	1	-	1	18	35	4	57
Public Service Commission	-	-	-	-	1	-	-	1
Rural Development	-	-	-	-	-	1	-	1
Social Services	-	-	-	-	1	1	-	2
Sub-total	16	4	6	26	156	93	46	295
Agencies:								
Cancer Foundation	-	-	-	-	-	20	-	20
Sask. Archives Board	-	-	-	-	14	-	15	29
Sask. Crop Insurance Corp.	-	-	-	-	2	1	2	5
Sask. Property Management Corp.	1	3	-	4	3	5	-	8
Sask. Water Corporation	-	-	-	-	3	-	-	3
Sub-total	1	3	-	4	22	26	17	65
Total	17	7	6	30	178	119	63	360

TABLE 14. Objectives of Expenditures by Department or Agency, 1990-91

Department or agency	Advancement of science	Communications	Energy & fuels					Environmental issues			
			Conservation	Fossil fuels	Hydro electric power	Renewable resources	Other	Air	Land	Water	Other
	in thousands of dollars										
Departments:											
Agriculture and Food	-	-	-	-	-	-	-	-	-	-	-
Community Services	-	-	-	-	-	-	-	-	-	-	-
Economic Diversification and Trade	-	-	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-	-	-
Energy and Mines	-	-	-	764	-	-	-	-	-	-	-
Environment and Public Safety	-	-	-	-	-	-	-	90	871	522	262
Executive Council	57	-	-	-	-	-	-	-	-	-	-
Family Foundation	76	-	-	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-	-	-	-
Health	-	-	-	-	-	-	-	-	-	-	-
Highways and Transportation	-	-	-	-	-	-	-	-	-	-	-
Human Resources, Labour & Employment	-	-	-	-	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	-	-	-	-	-	-	-	20	-
Public Service Commission	-	-	-	-	-	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-	-	-	-	-
Vote 35	367	-	-	-	-	-	361	-	-	-	1,090
Sub-total	500	-	-	764	-	-	361	90	871	542	1,352
Agencies:											
Cancer Foundation	-	-	-	-	-	-	-	-	-	-	-
Sask. Archives Board	-	-	-	-	-	-	-	-	-	-	-
Sask. Crop Insurance Corp.	-	-	-	-	-	-	-	-	-	-	-
Sask. Property Management Corp.	-	-	-	-	-	-	-	-	-	-	-
Sask. Water Corporation	-	-	-	-	-	-	-	-	-	2,745	-
Sub-total	-	-	-	-	-	-	-	-	-	2,745	-
Total	500	-	-	764	-	-	361	90	871	3,287	1,352

TABLE 14. Objectives of Expenditures by Department or Agency, 1990-91 - Continued

Department or agency	Health	Industrial & economic development					
		Agriculture	Fisheries	Forestry	Manufacturing	Minerals	Other
	in thousands of dollars						
Departments:							
Agriculture and Food	-	21,960	-	-	-	-	-
Community Services	-	-	-	-	-	-	-
Economic Diversification and Trade	-	-	-	-	4,569	-	100
Education	-	-	-	-	-	-	-
Energy and Mines	-	-	-	-	-	1,655	-
Environment and Public Safety	-	-	-	-	-	-	-
Executive Council	-	-	-	-	-	-	-
Family Foundation	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-
Health	7,522	-	-	-	-	-	-
Highways and Transportation	-	-	-	-	-	-	-
Human Resources, Labour & Employment	203	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	310	1,447	-	-	-
Public Service Commission	-	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-
Vote 35	-	745	-	-	803	1,108	1,262
Sub-total	7,725	22,705	310	1,447	5,372	2,763	1,362
Agencies:							
Cancer Foundation	647	-	-	-	-	-	-
Sask. Archives Board	-	-	-	-	-	-	-
Sask. Crop Insurance Corp.	-	3,272	-	-	-	-	-
Sask. Property Management Corp.	-	-	-	-	-	-	5,408
Sask. Water Corporation	-	-	-	-	-	-	-
Sub-total	647	3,272	-	-	-	-	5,408
Total	8,372	25,977	310	1,447	5,372	2,763	6,770

TABLE 14. Objectives of Expenditures by Department or Agency, 1990-91 - Concluded

Department or agency	Social development					Transportation	Wildlife	Other	Total
	Culture, sport & recreation	Education	Human resources	Urban & regional studies	Other				
	in thousands of dollars								
Departments:									
Agriculture and Food	-	-	-	-	-	-	-	-	21,960
Community Services	-	-	-	377	-	-	-	-	377
Economic Diversification and Trade	-	-	-	25	-	25	-	-	4,719
Education	-	2,848	-	-	-	-	-	-	2,848
Energy and Mines	-	-	-	-	-	-	-	-	2,419
Environment and Public Safety	-	-	-	-	-	-	-	-	1,745
Executive Council	-	-	-	-	-	-	-	-	57
Family Foundation	1,419	-	-	-	154	-	-	-	1,649
Finance	-	-	-	-	2,048	-	-	-	2,048
Health	-	-	-	-	-	-	-	-	7,522
Highways and Transportation	-	-	-	-	-	2,693	-	-	2,693
Human Resources, Labour & Employment	-	-	284	-	-	-	-	-	487
Justice	-	-	-	-	173	-	-	-	173
Parks and Renewable Resources	128	-	-	-	-	-	1,003	-	2,908
Public Service Commission	-	-	69	-	-	-	-	-	69
Rural Development	-	-	233	-	-	-	-	-	233
Social Services	-	-	-	-	183	-	-	-	183
Vote 35	-	-	-	-	-	-	-	-	5,736
Sub-total	1,547	2,848	586	402	2,558	2,718	1,003	-	57,826
Agencies:									
Cancer Foundation	-	-	-	-	-	-	-	-	647
Sask. Archives Board	1,083	-	-	-	-	-	-	-	1,083
Sask. Crop Insurance Corp.	-	-	-	-	-	-	-	-	3,272
Sask. Property Management Corp.	-	-	-	-	-	-	-	-	5,408
Sask. Water Corporation	-	-	-	-	-	-	-	-	2,745
Sub-total	1,083	-	-	-	-	-	-	-	13,155
Total	2,630	2,848	586	402	2,558	2,718	1,003	-	70,981

TABLE 15. Objectives of Expenditures by Activity, 1990-91

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Advancement of science	76	-	367	57	500
Communications	-	-	-	-	-
Energy and fuels:					
Conservation	-	-	-	-	-
Fossil fuels	8	258	14	484	764
Hydro electric energy	-	-	-	-	-
Renewable resources	-	-	-	-	-
Other	-	-	361	-	361
Sub-total	8	258	375	484	1,125
Environmental issues:					
Air	-	-	90	-	90
Land	-	871	-	-	871
Water	-	760	-	2,527	3,287
Other	-	-	1,290	62	1,352
Sub-total	-	1,631	1,380	2,589	5,600
Health	741	2,091	4,652	888	8,372
Industrial and economic development:					
Agriculture	263	438	19,063	6,213	25,977
Fisheries	100	210	-	-	310
Forestry	17	1,430	-	-	1,447
Manufacturing	1,197	444	3,417	314	5,372
Minerals	-	1,300	1,108	355	2,763
Other	60	370	1,485	4,855	6,770
Sub-total	1,637	4,192	25,073	11,737	42,639
Social development:					
Culture, sport and recreation	43	2,447	140	-	2,630
Education	69	300	9	2,470	2,848
Human resources	-	390	-	196	586
Urban and regional studies	11	254	117	20	402
Other	-	2,430	4	124	2,558
Sub-total	123	5,821	270	2,810	9,024
Transportation	675	1,755	288	-	2,718
Wildlife	694	309	-	-	1,003
Other	-	-	-	-	-
Total	3,954	16,057	32,405	18,565	70,981

TABLE 16. Total Expenditures by Activity and Performing Sector, 1991-92 Estimate

Activity	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council(1)	Other	Total
	in thousands of dollars						
Research and development (R&D)							
Current expenditures:							
In-house R&D	1,902	...	...	...	...	...	1,902
R&D contracts	31	1,685	1,117	-	-	50	2,883
R&D grants and contributions	...	6,452	8,551	432	6,005	1,873	23,313
Research fellowships	-	-	400	-	-	-	400
Admin of extramural R&D programs	1,380	...	...	...	...	...	1,380
Sub-total current R&D	3,313	8,137	10,068	432	6,005	1,923	29,878
Capital expenditures	80	...	...	...	...	...	80
Total R&D	3,393	8,137	10,068	432	6,005	1,923	29,958
Related scientific activities (RSA)							
Current expenditures	14,223	9,173	1,311	-	47	5,282	30,036
Admin of extramural RSA programs	231	...	...	...	...	...	231
Sub-total current RSA	14,454	9,173	1,311	-	47	5,282	30,267
Capital expenditures	865	...	...	...	...	...	865
Total RSA	15,319	9,173	1,311	-	47	5,282	31,132
Total	18,712	17,310	11,379	432	6,052	7,205	61,090

(1) Includes only annual funding by the Provincial Government.

TABLE 17. Total Expenditures by Department or Agency and Performing Sector, 1991-92 Estimate

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council(1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	330	9,203	7,116	-	30	1,611	18,290
Community Services	331	80	60	60	-	-	531
Economic Diversification and Trade	1,168	1,823	1,075	-	-	4	4,070
Education	454	750	-	-	-	-	1,204
Energy and Mines	1,132	205	181	-	-	41	1,559
Environment and Public Safety	1,375	75	-	-	-	75	1,525
Executive Council	-	-	-	-	-	61	61
Family Foundation	942	-	-	-	-	-	942
Finance	2,048	-	-	-	-	-	2,048
Health	2,383	90	2,868	372	-	1,500	7,213
Highways and Transportation	2,475	150	30	-	-	50	2,705
Human Resources, Labour & Employment	213	-	-	-	-	203	416
Justice	175	-	-	-	-	-	175
Parks and Renewable Resources	2,610	95	4	-	6	-	2,715
Public Service Commission	70	-	-	-	-	-	70
Rural Development	70	225	-	-	-	-	295
Social Services	35	-	35	-	-	-	70
Vote 35	-	-	-	-	5,975	-	5,975
Sub-total	15,811	12,696	11,369	432	6,011	3,545	49,864
Agencies:							
Cancer Foundation	430	-	-	-	-	-	430
Sask. Archives Board	1,898	-	-	-	-	-	1,898
Sask. Crop Insurance Corp.	232	-	-	-	-	3,075	3,307
Sask. Property Management Corp.	190	2,900	10	-	-	-	3,100
Sask. Water Corporation	151	1,714	-	-	41	585	2,491
Sub-total	2,901	4,614	10	-	41	3,660	11,226
Total	18,712	17,310	11,379	432	6,052	7,205	61,090

(1) Includes only annual funding by the Provincial Government.

TABLE 18. Total Expenditures by Department or Agency and Activity, 1991-92 Estimate

Department or agency	Research and development			Related scientific activities			Total
	Current	AEP(1)	Capital	Current	AEP(1)	Capital	
	in thousands of dollars						
Departments:							
Agriculture and Food	12,943	270	-	5,077	-	-	18,290
Community Services	180	11	-	340	-	-	531
Economic Diversification and Trade	2,510	997	-	392	171	-	4,070
Education	34	-	-	950	20	200	1,204
Energy and Mines	3	-	-	1,556	-	-	1,559
Environment and Public Safety	-	-	-	1,525	-	-	1,525
Executive Council	-	-	-	61	-	-	61
Family Foundation	63	-	-	879	-	-	942
Finance	-	-	-	2,048	-	-	2,048
Health	4,431	-	-	2,782	-	-	7,213
Highways and Transportation	810	60	80	1,755	-	-	2,705
Human Resources, Labour & Employment	-	-	-	416	-	-	416
Justice	-	-	-	175	-	-	175
Parks and Renewable Resources	782	12	-	1,921	-	-	2,715
Public Service Commission	-	-	-	70	-	-	70
Rural Development	-	-	-	295	-	-	295
Social Services	-	-	-	70	-	-	70
Vote 35	5,975	-	-	-	-	-	5,975
Sub-total	27,731	1,350	80	20,312	191	200	49,864
Agencies:							
Cancer Foundation	430	-	-	-	-	-	430
Sask. Archives Board	-	-	-	1,233	-	665	1,898
Sask. Crop Insurance Corp.	7	-	-	3,300	-	-	3,307
Sask. Property Management Corp.	330	30	-	2,700	40	-	3,100
Sask. Water Corporation	-	-	-	2,491	-	-	2,491
Sub-total	767	30	-	9,724	40	665	11,226
Total	28,498	1,380	80	30,036	231	865	61,090

(1) Administration of extramural programs.

TABLE 19. Total Expenditures on R&D by Department or Agency and Performing Sector, 1991-92 Estimate

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council(1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	270	6,112	6,428	-	30	373	13,213
Community Services	11	60	60	60	-	-	191
Economic Diversification and Trade	997	1,435	1,075	-	-	-	3,507
Education	34	-	-	-	-	-	34
Energy and Mines	1	-	2	-	-	-	3
Environment and Public Safety	-	-	-	-	-	-	-
Executive Council	-	-	-	-	-	-	-
Family Foundation	63	-	-	-	-	-	63
Finance	-	-	-	-	-	-	-
Health	96	-	2,463	372	-	1,500	4,431
Highways and Transportation	720	150	30	-	-	50	950
Human Resources, Labour & Employment	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-
Parks and Renewable Resources	714	80	-	-	-	-	794
Public Service Commission	-	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-
Vote 35	-	-	-	-	5,975	-	5,975
Sub-total	2,906	7,837	10,058	432	6,005	1,923	29,161
Agencies:							
Cancer Foundation	430	-	-	-	-	-	430
Sask. Archives Board	-	-	-	-	-	-	-
Sask. Crop Insurance Corp.	7	-	-	-	-	-	7
Sask. Property Management Corp.	50	300	10	-	-	-	360
Sask. Water Corporation	-	-	-	-	-	-	-
Sub-total	487	300	10	-	-	-	797
Total	3,393	8,137	10,068	432	6,005	1,923	29,958

(1) Includes only annual funding by the Provincial Government.

TABLE 20. Personnel Engaged in Scientific Activities by Department or Agency and Activity, 1991-92 Estimate

Department or agency	Research and development				Related scientific activities			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	-	-	-	-	1	1	-	2
Community Services	-	-	-	-	6	-	-	6
Economic Diversification and Trade	-	-	-	-	-	-	-	-
Education	1	-	-	1	4	2	1	7
Energy and Mines	-	-	-	-	13	-	7	20
Environment and Public Safety	-	-	-	-	5	11	-	16
Executive Council	-	-	-	-	-	-	-	-
Family Foundation	1	-	-	1	12	2	5	19
Finance	-	-	-	-	28	-	6	34
Health	-	2	1	3	21	7	3	31
Highways and Transportation	5	4	1	10	7	13	10	30
Human Resources, Labour & Employment	-	-	-	-	4	-	1	5
Justice	-	-	-	-	3	-	-	3
Parks and Renewable Resources	10	2	2	14	7	30	2	39
Public Service Commission	-	-	-	-	1	-	-	1
Rural Development	-	-	-	-	1	1	-	2
Social Services	-	-	-	-	1	-	-	1
Sub-total	17	8	4	29	114	67	35	216
Agencies:								
Cancer Foundation	-	16	-	16	-	-	-	-
Sask. Archives Board	-	-	-	-	15	-	23	38
Sask. Crop Insurance Corp.	-	-	-	-	3	1	2	6
Sask. Property Management Corp.	1	-	-	1	1	2	-	3
Sask. Water Corporation	-	-	-	-	2	-	-	2
Sub-total	1	16	-	17	21	3	25	49
Total	18	24	4	46	135	70	60	265

TABLE 20. Personnel Engaged in Scientific Activities by Department or Agency and Activity, 1991-92 Estimate - Concluded

Department or agency	Administration of extramural programs				Total scientific personnel			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	3	3	2	8	4	4	2	10
Community Services	-	-	-	-	6	-	-	6
Economic Diversification and Trade	10	-	4	14	10	-	4	14
Education	1	-	-	1	6	2	1	9
Energy and Mines	-	-	-	-	13	-	7	20
Environment and Public Safety	-	-	-	-	5	11	-	16
Executive Council	-	-	-	-	-	-	-	-
Family Foundation	-	-	-	-	13	2	5	20
Finance	-	-	-	-	28	-	6	34
Health	-	-	-	-	21	9	4	34
Highways and Transportation	1	-	-	1	13	17	11	41
Human Resources, Labour & Employment	-	-	-	-	4	-	1	5
Justice	-	-	-	-	3	-	-	3
Parks and Renewable Resources	-	1	-	1	17	33	4	54
Public Service Commission	-	-	-	-	1	-	-	1
Rural Development	-	-	-	-	1	1	-	2
Social Services	-	-	-	-	1	-	-	1
Sub-total	15	4	6	25	146	79	45	270
Agencies:								
Cancer Foundation	-	-	-	-	-	16	-	16
Sask. Archives Board	-	-	-	-	15	-	23	38
Sask. Crop Insurance Corp.	-	-	-	-	3	1	2	6
Sask. Property Management Corp.	1	2	-	3	3	4	-	7
Sask. Water Corporation	-	-	-	-	2	-	-	2
Sub-total	1	2	-	3	23	21	25	69
Total	16	6	6	28	169	100	70	339

TABLE 21. Objectives of Expenditures by Department or Agency, 1991-92 Estimate

Department or agency	Advancement of science	Communications	Energy & fuels					Environmental issues			
			Conservation	Fossil fuels	Hydro electric power	Renewable resources	Other	Air	Land	Water	Other
	in thousands of dollars										
Departments:											
Agriculture and Food	-	-	-	-	-	-	-	-	-	-	-
Community Services	-	-	-	-	-	-	-	-	-	-	-
Economic Diversification and Trade	-	-	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-	-	-
Energy and Mines	-	-	-	100	-	-	-	-	-	-	-
Environment and Public Safety	-	-	-	-	-	-	-	-	946	529	50
Executive Council	61	-	-	-	-	-	-	-	-	-	-
Family Foundation	63	-	-	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-	-	-	-
Health	-	-	-	-	-	-	-	-	-	-	-
Highways and Transportation	-	-	-	-	-	-	-	-	-	-	-
Human Resources, Labour & Employment	-	-	-	-	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	-	-	-	-	-	-	-	25	-
Public Service Commission	-	-	-	-	-	-	-	-	-	-	-
Rural Development	-	-	-	-	-	-	-	-	-	7	-
Social Services	-	-	-	-	-	-	-	-	-	-	-
Vote 35	383	-	-	-	-	-	376	-	-	-	1,135
Sub-total	507	-	-	100	-	-	376	-	946	561	1,185
Agencies:											
Cancer Foundation	-	-	-	-	-	-	-	-	-	-	-
Sask. Archives Board	-	-	-	-	-	-	-	-	-	-	-
Sask. Crop Insurance Corp.	-	-	-	-	-	-	-	-	-	-	-
Sask. Property Management Corp.	-	-	-	-	-	-	-	-	-	-	-
Sask. Water Corporation	-	-	-	-	-	-	-	-	-	2,279	-
Sub-total	-	-	-	-	-	-	-	-	-	2,279	-
Total	507	-	-	100	-	-	376	-	946	2,840	1,185

TABLE 21. Objectives of Expenditures by Department or Agency, 1991-92 Estimate - Continued

Department or agency	Health	Industrial & economic development					
		Agriculture	Fisheries	Forestry	Manufacturing	Minerals	Other
	in thousands of dollars						
Departments:							
Agriculture and Food	-	18,290	-	-	-	-	-
Community Services	-	-	-	-	-	-	-
Economic Diversification and Trade	-	7	-	-	4,044	-	19
Education	-	-	-	-	-	-	-
Energy and Mines	-	-	-	-	-	1,459	-
Environment and Public Safety	-	-	-	-	-	-	-
Executive Council	-	-	-	-	-	-	-
Family Foundation	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-
Health	7,213	-	-	-	-	-	-
Highways and Transportation	-	-	-	-	-	-	-
Human Resources, Labour & Employment	203	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	310	1,447	-	-	-
Public Service Commission	-	-	-	-	-	-	-
Rural Development	-	25	-	-	-	-	-
Social Services	-	-	-	-	-	-	-
Vote 35	-	776	-	-	836	1,154	1,315
Sub-total	7,416	19,098	310	1,447	4,880	2,613	1,334
Agencies:							
Cancer Foundation	430	-	-	-	-	-	-
Sask. Archives Board	-	-	-	-	-	-	-
Sask. Crop Insurance Corp.	-	3,307	-	-	-	-	-
Sask. Property Management Corp.	-	-	-	-	-	-	3,100
Sask. Water Corporation	-	212	-	-	-	-	-
Sub-total	430	3,519	-	-	-	-	3,100
Total	7,846	22,617	310	1,447	4,880	2,613	4,434

TABLE 21. Objectives of Expenditures by Department or Agency, 1991-92 Estimate - Concluded

Department or agency	Social development					Transportation	Wildlife	Other	Total
	Culture, sport & recreation	Education	Human resources	Urban & regional studies	Other				
	in thousands of dollars								
Departments:									
Agriculture and Food	-	-	-	-	-	-	-	-	18,290
Community Services	-	-	-	531	-	-	-	-	531
Economic Diversification and Trade	-	-	-	-	-	-	-	-	4,070
Education	-	1,204	-	-	-	-	-	-	1,204
Energy and Mines	-	-	-	-	-	-	-	-	1,559
Environment and Public Safety	-	-	-	-	-	-	-	-	1,525
Executive Council	-	-	-	-	-	-	-	-	61
Family Foundation	579	-	-	-	300	-	-	-	942
Finance	-	-	-	-	2,048	-	-	-	2,048
Health	-	-	-	-	-	-	-	-	7,213
Highways and Transportation	-	-	-	-	-	2,705	-	-	2,705
Human Resources, Labour & Employment	-	-	213	-	-	-	-	-	436
Justice	-	-	-	-	175	-	-	-	175
Parks and Renewable Resources	158	-	-	-	-	-	775	-	2,715
Public Service Commission	-	-	70	-	-	-	-	-	70
Rural Development	-	-	-	-	-	263	-	-	295
Social Services	-	-	-	-	70	-	-	-	70
Vote 35	-	-	-	-	-	-	-	-	5,975
Sub-total	737	1,204	283	531	2,593	2,968	775	-	49,864
Agencies:									
Cancer Foundation	-	-	-	-	-	-	-	-	430
Sask. Archives Board	1,898	-	-	-	-	-	-	-	1,898
Sask. Crop Insurance Corp.	-	-	-	-	-	-	-	-	3,307
Sask. Property Management Corp.	-	-	-	-	-	-	-	-	3,100
Sask. Water Corporation	-	-	-	-	-	-	-	-	2,491
Sub-total	1,898	-	-	-	-	-	-	-	11,226
Total	2,635	1,204	283	531	2,593	2,968	775	-	61,090

TABLE 22. Objectives of Expenditures by Activity, 1991-92 Estimate

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Advancement of science	63	-	383	61	507
Communications	-	-	-	-	-
Energy and fuels:					
Conservation	-	-	-	-	-
Fossil fuels	1	35	2	62	100
Hydro electric energy	-	-	-	-	-
Renewable resources	-	-	-	-	-
Other	-	-	376	-	376
Sub-total	1	35	378	62	476
Environmental issues:					
Air	-	-	-	-	-
Land	-	871	-	75	946
Water	-	662	-	2,178	2,840
Other	-	-	1,135	50	1,185
Sub-total	-	1,533	1,135	2,303	4,971
Health	526	2,287	4,335	698	7,846
Industrial and economic development:					
Agriculture	277	310	13,719	8,311	22,617
Fisheries	100	210	-	-	310
Forestry	17	1,430	-	-	1,447
Manufacturing	997	171	3,331	381	4,880
Minerals	-	1,096	1,154	363	2,613
Other	50	140	1,640	2,604	4,434
Sub-total	1,441	3,357	19,844	11,659	36,301
Social development:					
Culture, sport and recreation	42	2,513	80	-	2,635
Education	34	420	-	750	1,204
Human resources	-	283	-	-	283
Urban and regional studies	11	320	180	20	531
Other	-	2,558	-	35	2,593
Sub-total	87	6,094	260	805	7,246
Transportation	720	1,793	230	225	2,968
Wildlife	555	220	-	-	775
Other	-	-	-	-	-
Total	3,393	15,319	26,565	15,813	61,090

TABLE 23. Total Expenditures in the Natural Sciences, by Activity, 1984-85 to 1991-92

Activity	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Research and development (R&D)								
Current expenditures:								
In-house R&D	2,392	2,408	2,994	1,530	1,838	1,264	2,131	1,868
R&D contracts	4,158	6,734	6,145	4,174	2,482	2,557	3,262	2,868
R&D grants and contributions	10,788	7,829	14,100	18,379	16,007	21,335	26,579	20,833
Research fellowships	92	281	349	208	307	153	384	340
Admin of extramural R&D programs	...	...	...	857	1,041	1,226	1,556	1,369
Sub-total current R&D	17,430	17,252	23,588	25,148	21,675	26,535	33,912	27,278
Capital expenditures	125	218	249	243	51	54	149	80
Total R&D	17,555	17,470	23,837	25,391	21,726	26,589	34,061	27,358
Related scientific activities (RSA)								
Current expenditures:								
Education support	110	456	-	-	5	504	271	160
Technical surveys	3,445	4,169	4,864	4,959	6,098	6,222	14,153	11,952
Information services	2,368	2,006	2,475	1,108	940	1,162	436	368
Special services and studies	1,949	3,161	5,424	5,937	4,103	7,191	5,577	7,018
Museum services	178	171	219	352	767	569	508	220
Admin of extramural RSA programs	...	...	...	312	265	610	372	211
Sub-total current RSA	8,050	9,963	12,982	12,668	12,178	16,258	21,317	19,929
Capital expenditures	81	37	27	25	314	395	210	-
Total RSA	8,131	10,000	13,009	12,693	12,492	16,653	21,527	19,929
Total	25,686	27,470	36,846	38,084	34,218	43,242	55,588	47,287

TABLE 24. Total Expenditures in the Natural Sciences, by Department or Agency, 1984-85 to 1991-92

Department or agency	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Departments:								
Agriculture and Food	6,076	4,916	11,870	11,968	10,807	13,999	19,368	16,588
Culture and Recreation	215	206	246	...	...	...	...	...
Culture, Multiculturalism & Recreation	...	...	...	...	...	676	...	...
Economic Development and Tourism	...	...	...	...	22	...	...	...
Economic Diversification and Trade	...	...	...	...	...	...	4,569	3,764
Energy and Mines	4,274	3,437	5,422	5,380	1,701	2,651	2,419	1,559
Environment	755	1,773	1,273	...	...	...	...	...
Environment and Public Safety	...	...	...	1,726	1,605	1,563	1,745	1,525
Family Foundation	...	...	...	...	...	...	584	283
Future Corporation	...	...	...	...	...	1,027	...	...
Health	2,847	3,016	2,926	2,579	2,178	3,011	3,630	3,129
Highways and Transportation	1,628	2,412	3,083	3,298	3,220	2,638	2,693	2,705
Parks and Renewable Resources	1,409	1,362	1,362	...	...	2,651	2,554	2,459
Parks, Recreation and Culture	...	...	...	1,636	3,451	...	...	...
Rural Development	197	200	267	256	265	231	233	295
Science and Technology	2,415	3,992	4,177	3,675	3,746	4,885	...	...
Supply and Services	440	650	555	...	...	...	...	...
Tourism and Small Business	62	44	...	...	...	...	...	...
Vote 35	4,106	4,081	4,081	6,443	6,042	7,336	5,736	5,975
Sub-total	24,424	26,089	35,262	36,961	33,037	40,668	43,531	38,282
Agencies:								
Cancer Foundation	407	447	434	393	379	398	647	430
Sask. Crop Insurance Corp.	100	150	150	155	155	135	3,272	3,307
Sask. Property Management Corp.	...	...	...	555	635	780	5,408	3,100
Sask. Water Corporation	755	784	1,000	20	12	1,261	2,730	2,168
Sub-total	1,262	1,381	1,584	1,123	1,181	2,574	12,057	9,005
Total	25,686	27,470	36,846	38,084	34,218	43,242	55,588	47,287

TABLE 25. Total Expenditures in the Natural Sciences, by Performing Sector, 1984-85 to 1991-92

Performing sector	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Intramural	8,992	9,426	10,761	8,777	10,817	11,317	12,764	10,909
Industry	4,554	4,795	8,553	9,128	6,745	11,624	22,149	15,598
Universities	6,244	4,733	8,278	8,733	8,653	10,172	8,989	10,157
Hospitals and health organizations	886	986	364	-	-	120	678	372
Saskatchewan Research Council (1)	4,400	6,962	7,429	7,945	6,378	7,855	6,183	6,052
Other	610	568	8,661	3,501	1,625	2,154	4,825	4,199
Total	25,686	27,470	44,046	38,084	34,218	43,242	55,588	47,287

(1) Includes only Provincial Government payments to SRC.

TABLE 26. Total Expenditures on R&D in the Natural Sciences, by Performing Sector, 1984-85 to 1991-92

Performing sector	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Intramural	2,952	2,981	3,500	2,725	2,962	2,729	3,874	3,348
Industry	3,497	2,553	4,972	4,212	3,398	6,584	14,941	7,797
Universities	5,562	4,063	6,829	7,608	7,636	8,793	7,603	9,413
Hospitals and health organizations	886	986	361	-	-	100	678	372
Saskatchewan Research Council (1)	4,278	6,649	7,321	7,883	6,265	7,701	6,057	6,005
Other	380	238	854	2,963	1,465	682	908	423
Total	17,555	17,470	23,837	25,391	21,726	26,589	34,061	27,358

(1) Includes only Provincial Government payments to SRC.

TABLE 27. Total Expenditures on R&D in the Natural Sciences, by Department or Agency, 1984-85 to 1991-92

Department or agency	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Departments:								
Agriculture and Food	4,989	4,196	9,065	9,977	8,376	11,365	18,574	13,213
Culture and Recreation	24	25	25	...	...	...	...	...
Culture, Multiculturalism & Recreation	...	...	...	...	...	82	...	...
Economic Diversification and Trade	...	...	...	...	...	...	3,811	3,212
Energy and Mines	3,378	2,665	3,063	1,729	300	501	22	3
Environment	55	220	274	...	...	...	...	...
Environment and Public Safety	-	...	...	200	200	300	290	-
Family Foundation	...	...	...	...	...	...	76	63
Future Corporation	...	...	...	...	...	248	...	...
Health	2,609	2,837	2,785	2,401	2,130	2,509	2,786	2,351
Highways and Transportation	225	612	1,072	1,096	770	658	938	950
Parks and Renewable Resources	621	806	643	...	...	776	894	794
Parks, Recreation and Culture	...	...	...	548	734	...	...	...
Rural Development	-	-	-	-	-	-	-	-
Science and Technology	986	1,444	2,222	2,514	2,598	2,216	...	...
Supply and Services	70	72	50	...	...	...	...	...
Tourism and Small Business	...	...	...	...	...	...	...	...
Vote 35	4,106	4,081	4,081	6,443	6,042	7,336	5,736	5,975
Sub-total	17,063	16,958	23,280	24,908	21,150	25,991	33,127	26,561
Agencies:								
Cancer Foundation	407	447	434	393	379	398	647	430
Sask. Crop Insurance Corp.	5	5	5	20	20	...	7	7
Sask. Property Management Corp.	...	...	...	50	165	200	280	360
Sask. Water Corporation	80	60	118	20	12	...	-	-
Sub-total	492	512	557	483	576	598	934	797
Total	17,555	17,470	23,837	25,391	21,726	26,589	34,061	27,358

TABLE 28. Personnel Engaged in Natural Science Activities, by Activity and Category, 1984-85 to 1991-92

Activity and category	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	person-years							
Research and development								
Scientific and professional	37	29	42	22	18	10	17	17
Technical	39	38	41	18	28	23	33	24
Other	7	5	5	1	1	1	4	4
Sub-total R&D personnel	83	72	88	41	47	34	54	45
Related scientific activities								
Scientific and professional	51	51	35	30	32	44	49	45
Technical	72	80	55	43	72	56	66	63
Other	17	18	14	17	24	26	23	22
Sub-total RSA personnel	140	149	104	90	128	126	138	130
Administration of extramural programs								
Scientific and professional	-	-	-	13	14	19	16	15
Technical	-	-	-	3	1	6	7	6
Other	-	-	-	4	6	12	6	6
Sub-total AEP personnel	-	-	-	20	21	37	29	27
Total science activities								
Scientific and professional	88	80	77	65	64	73	82	77
Technical	111	118	96	64	101	85	106	93
Other	24	23	19	22	31	39	33	32
Total scientific personnel	223	221	192	151	196	197	221	202

TABLE 29. Total Expenditures in the Natural Sciences, by Department or Agency and Source of Funds, 1990-91

Department or agency	Departmental budget	Transfers from other departments	Transfers from federal government	From trust funds	From other sources	Total
	in thousands of dollars					
Departments:						
Agriculture and Food	17,930	-	-	1,438	-	19,368
Economic Diversification & Trade	4,551	-	18	-	-	4,569
Energy and Mines	2,285	134	-	-	-	2,419
Environment and Public Safety	1,745	-	-	-	-	1,745
Family Foundation	561	-	13	-	10	584
Health	3,630	-	-	-	-	3,630
Highways and Transportation	2,693	-	-	-	-	2,693
Parks and Renewable Resources	2,136	-	-	300	118	2,554
Rural Development	233	-	-	-	-	233
Vote 35	5,736	-	-	-	-	5,736
Sub-total	41,500	134	31	1,738	128	43,531
Agencies:						
Cancer Foundation	647	-	-	-	-	647
Sask. Crop Insurance Corp.	3,272	-	-	-	-	3,272
Sask. Property Management Corp.	3,178	230	-	-	2,000	5,408
Sask. Water Corporation	2,061	-	669	-	-	2,730
Sub-total	9,158	230	669	-	2,000	12,057
Total	50,658	364	700	1,738	2,128	55,588

TABLE 30. Total Expenditures in the Natural Sciences, by Activity and Performing Sector, 1990-91

Activity	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Research and development (R&D)							
Current expenditures:							
In-house R&D	2,131	...	...	...	...	...	2,131
R&D contracts	38	2,393	591	-	90	150	3,262
R&D grants and contributions	...	12,548	6,628	678	5,967	758	26,579
Research fellowships	-	-	384	-	-	-	384
Admin of extramural R&D programs	1,556	...	...	...	...	...	1,556
Sub-total current R&D	3,725	14,941	7,603	678	6,057	908	33,912
Capital expenditures	149	...	...	...	...	...	149
Total R&D	3,874	14,941	7,603	678	6,057	908	34,061
Related scientific activities (RSA)							
Current expenditures:							
Education support	134	97	26	-	-	14	271
Technical surveys	4,748	4,988	646	-	80	3,691	14,153
Information services	348	11	39	-	33	5	436
Special services and studies	2,570	2,112	675	-	13	207	5,577
Museum services	508	-	-	-	-	-	508
Admin of extramural RSA programs	372	...	...	...	...	...	372
Sub-total current RSA	8,680	7,208	1,386	-	126	3,917	21,317
Capital expenditures	210	...	...	...	...	...	210
Total RSA	8,890	7,208	1,386	-	126	3,917	21,527
Total	12,764	22,149	8,989	678	6,183	4,825	55,588

(1) Includes only Provincial Government payments to the SRC.

TABLE 31. Total Expenditures in the Natural Sciences, by Department or Agency and Performing Sector, 1990-91

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	366	12,600	5,430	-	231	741	19,368
Economic Diversification & Trade	1,641	2,221	551	-	25	131	4,569
Energy and Mines	1,566	588	167	-	45	53	2,419
Environment and Public Safety	1,375	22	250	-	98	-	1,745
Family Foundation	584	-	-	-	-	-	584
Health	783	-	2,169	678	-	-	3,630
Highways and Transportation	2,430	191	22	-	-	50	2,693
Parks and Renewable Resources	2,494	40	3	-	5	12	2,554
Rural Development	37	196	-	-	-	-	233
Vote 35	-	-	-	-	5,736	-	5,736
Sub-total	11,276	15,858	8,592	678	6,140	987	43,531
Agencies:							
Cancer Foundation	647	-	-	-	-	-	647
Sask. Crop Insurance Corp.	197	-	-	-	-	3,075	3,272
Sask. Property Management Corp.	388	4,990	30	-	-	-	5,408
Sask. Water Corporation	256	1,301	367	-	43	763	2,730
Sub-total	1,488	6,291	397	-	43	3,838	12,057
Total	12,764	22,149	8,989	678	6,183	4,825	55,588

(1) Includes only Provincial Government payments to the SRC.

TABLE 32. Total Expenditures in the Natural Sciences, by Department or Agency and Activity, 1990-91

Department or agency	Research & development			Related scientific activities							Total
	Current	AEP (1)	Capital	Education support	Technical surveys	Information services	Special services & studies	Museum services	AEP (1)	Capital	
	in thousands of dollars										
Departments:											
Agriculture and Food	18,318	256	-	-	448	26	320	-	-	-	19,368
Economic Diversification & Trade	2,614	1,197	-	137	-	336	141	-	144	-	4,569
Energy and Mines	22	-	-	134	1,327	57	694	-	-	185	2,419
Environment and Public Safety	290	-	-	-	614	8	833	-	-	-	1,745
Family Foundation	76	-	-	-	-	-	-	508	-	-	584
Health	2,786	-	-	-	-	5	839	-	-	-	3,630
Highways and Transportation	838	60	40	-	1,314	4	437	-	-	-	2,693
Parks and Renewable Resources	881	13	-	-	1,660	-	-	-	-	-	2,554
Rural Development	-	-	-	-	-	-	233	-	-	-	233
Vote 35	5,736	-	-	-	-	-	-	-	-	-	5,736
Sub-total	31,561	1,526	40	271	5,363	436	3,497	508	144	185	43,531
Agencies:											
Cancer Foundation	538	-	109	-	-	-	-	-	-	-	647
Sask. Crop Insurance Corp.	7	-	-	-	3,265	-	-	-	-	-	3,272
Sask. Property Management Corp.	250	30	-	-	4,875	-	-	-	228	25	5,408
Sask. Water Corporation	-	-	-	-	650	-	2,080	-	-	-	2,730
Sub-total	795	30	109	-	8,790	-	2,080	-	228	25	12,057
Total	32,356	1,556	149	271	14,153	436	5,577	508	372	210	55,588

(1) Administration of extramural programs

TABLE 33. Total Expenditures on R&D in the Natural Sciences, by Department or Agency and Performing Sector, 1990-91

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	256	12,548	4,798	-	231	741	18,574
Economic Diversification & Trade	1,197	1,972	525	-	-	117	3,811
Energy and Mines	8	-	14	-	-	-	22
Environment and Public Safety	-	-	200	-	90	-	290
Family Foundation	76	-	-	-	-	-	76
Health	94	-	2,014	678	-	-	2,786
Highways and Transportation	675	191	22	-	-	50	938
Parks and Renewable Resources	854	40	-	-	-	-	894
Rural Development	-	-	-	-	-	-	-
Vote 35	-	-	-	-	5,736	-	5,736
Sub-total	3,160	14,751	7,573	678	6,057	908	33,127
Agencies:							
Cancer Foundation	647	-	-	-	-	-	647
Sask. Crop Insurance Corp.	7	-	-	-	-	-	7
Sask. Property Management Corp.	60	190	30	-	-	-	280
Sask. Water Corporation	-	-	-	-	-	-	-
Sub-total	714	190	30	-	-	-	934
Total	3,874	14,941	7,603	678	6,057	908	34,061

(1) Includes only Provincial Government payments to the SRC.

TABLE 34. Intramural Expenditures in the Natural Sciences, by Department or Agency and Type of Expenditure, 1990-91

Department or agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
	in thousands of dollars			
Departments:				
Agriculture and Food	352	14	-	366
Economic Diversification & Trade	718	923	-	1,641
Energy and Mines	900	481	185	1,566
Environment and Public Safety	960	415	-	1,375
Family Foundation	390	194	-	584
Health	395	388	-	783
Highways and Transportation	1,738	652	40	2,430
Parks and Renewable Resources	1,756	738	-	2,494
Rural Development	19	18	-	37
Vote 35	-	-	-	-
Sub-total	7,228	3,823	225	11,276
Agencies:				
Cancer Foundation	421	117	109	647
Sask. Crop Insurance Corp.	142	55	-	197
Sask. Property Management Corp.	338	25	25	388
Sask. Water Corporation	256	-	-	256
Sub-total	1,157	197	134	1,488
Total	8,385	4,020	359	12,764

TABLE 35. Personnel Engaged in Natural Science Activities, by Department or Agency and Activity, 1990-91

Department or agency	Research and development				Related scientific activities			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	-	-	-	-	2	2	-	4
Economic Diversification & Trade	-	-	-	-	2	-	-	2
Energy and Mines	-	-	-	-	14	-	6	20
Environment and Public Safety	-	-	-	-	5	11	-	16
Family Foundation	1	-	-	1	4	1	4	9
Health	-	2	1	3	3	8	1	12
Highways and Transportation	5	6	1	12	7	13	10	30
Parks and Renewable Resources	10	5	2	17	6	27	-	33
Rural Development	-	-	-	-	-	1	-	1
Vote 35	-	-	-	-	-	-	-	-
Sub-total	16	13	4	33	43	63	21	127
Agencies:								
Cancer Foundation	-	20	-	20	-	-	-	-
Sask. Crop Insurance Corp.	-	-	-	-	2	1	2	5
Sask. Property Management Corp.	1	-	-	1	1	2	-	3
Sask. Water Corporation	-	-	-	-	3	-	-	3
Sub-total	1	20	-	21	6	3	2	11
Total	17	33	4	54	49	66	23	138

TABLE 35. Personnel Engaged in Natural Science Activities, by Department or Agency and Activity, 1990-91 - Concluded

Department or agency	Administration of extramural programs				Total scientific personnel			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	3	3	2	8	5	5	2	12
Economic Diversification & Trade	11	-	4	15	13	-	4	17
Energy and Mines	-	-	-	-	14	-	6	20
Environment and Public Safety	-	-	-	-	5	11	-	16
Family Foundation	-	-	-	-	5	1	4	10
Health	-	-	-	-	3	10	2	15
Highways and Transportation	1	-	-	1	13	19	11	43
Parks and Renewable Resources	-	1	-	1	16	33	2	51
Rural Development	-	-	-	-	-	1	-	1
Vote 35	-	-	-	-	-	-	-	-
Sub-total	15	4	6	25	74	80	31	185
Agencies:								
Cancer Foundation	-	-	-	-	-	20	-	20
Sask. Crop Insurance Corp.	-	-	-	-	2	1	2	5
Sask. Property Management Corp.	1	3	-	4	3	5	-	8
Sask. Water Corporation	-	-	-	-	3	-	-	3
Sub-total	1	3	-	4	8	26	2	36
Total	16	7	6	29	82	106	33	221

TABLE 36. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1990-91

Department or agency	Advancement of science	Communications	Energy & fuels					Environmental issues			
			Conservation	Fossil fuels	Hydro electric power	Renewable resources	Other	Air	Land	Water	Other
	in thousands of dollars										
Departments:											
Agriculture and Food	-	-	-	-	-	-	-	-	-	-	-
Economic Diversification & Trade	-	-	-	-	-	-	-	-	-	-	-
Energy and Mines	-	-	-	764	-	-	-	-	-	-	-
Environment and Public Safety	-	-	-	-	-	-	-	90	871	522	262
Family Foundation	76	-	-	-	-	-	-	-	-	-	-
Health	-	-	-	-	-	-	-	-	-	-	-
Highways and Transportation	-	-	-	-	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	-	-	-	-	-	-	-	20	-
Rural Development	-	-	-	-	-	-	-	-	-	-	-
Vote 35	367	-	-	-	-	-	361	-	-	-	1,090
Sub-total	443	-	-	764	-	-	361	90	871	542	1,352
Agencies:											
Cancer Foundation	-	-	-	-	-	-	-	-	-	-	-
Sask. Crop Insurance Corp.	-	-	-	-	-	-	-	-	-	-	-
Sask. Property Management Corp.	-	-	-	-	-	-	-	-	-	-	-
Sask. Water Corporation	-	-	-	-	-	-	-	-	-	2,730	-
Sub-total	-	-	-	-	-	-	-	-	-	2,730	-
Total	443	-	-	764	-	-	361	90	871	3,272	1,352

TABLE 36. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1990-91 - Continued

Department or agency	Health	Industrial & economic development					
		Agriculture	Fisheries	Forestry	Manufacturing	Minerals	Other
	in thousands of dollars						
Departments:							
Agriculture and Food	-	19,368	-	-	-	-	-
Economic Diversification & Trade	-	-	-	-	4,569	-	-
Energy and Mines	-	-	-	-	-	1,655	-
Environment and Public Safety	-	-	-	-	-	-	-
Family Foundation	-	-	-	-	-	-	-
Health	3,630	-	-	-	-	-	-
Highways and Transportation	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	310	1,447	-	-	-
Rural Development	-	-	-	-	-	-	-
Vote 35	-	745	-	-	803	1,108	1,262
Sub-total	3,630	20,113	310	1,447	5,372	2,763	1,262
Agencies:							
Cancer Foundation	647	-	-	-	-	-	-
Sask. Crop Insurance Corp.	-	3,272	-	-	-	-	-
Sask. Property Management Corp.	-	-	-	-	-	-	5,408
Sask. Water Corporation	-	-	-	-	-	-	-
Sub-total	647	3,272	-	-	-	-	5,408
Total	4,277	23,385	310	1,447	5,372	2,763	6,670

TABLE 36. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1990-91 - Concluded

Department or agency	Social development					Transportation	Wildlife	Other	Total
	Culture, sport & recreation	Education	Human resources	Urban & regional studies	Other				
	in thousands of dollars								
Departments:									
Agriculture and Food	-	-	-	-	-	-	-	-	19,368
Economic Diversification & Trade	-	-	-	-	-	-	-	-	4,569
Energy and Mines	-	-	-	-	-	-	-	-	2,419
Environment and Public Safety	-	-	-	-	-	-	-	-	1,745
Family Foundation	508	-	-	-	-	-	-	-	584
Health	-	-	-	-	-	-	-	-	3,630
Highways and Transportation	-	-	-	-	-	2,693	-	-	2,693
Parks and Renewable Resources	83	-	-	-	-	-	694	-	2,554
Rural Development	-	-	233	-	-	-	-	-	233
Vote 35	-	-	-	-	-	-	-	-	5,736
Sub-total	591	-	233	-	-	2,693	694	-	43,531
Agencies:									
Cancer Foundation	-	-	-	-	-	-	-	-	647
Sask. Crop Insurance Corp.	-	-	-	-	-	-	-	-	3,272
Sask. Property Management Corp.	-	-	-	-	-	-	-	-	5,408
Sask. Water Corporation	-	-	-	-	-	-	-	-	2,730
Sub-total	-	-	-	-	-	-	-	-	12,057
Total	591	-	233	-	-	2,693	694	-	55,588

TABLE 37. Objectives of Expenditures in the Natural Sciences, by Activity, 1990-91

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Advancement of science	76	-	367	-	443
Communications	-	-	-	-	-
Energy and fuels:	-	-	-	-	-
Conservation	-	-	-	-	-
Fossil fuels	8	258	14	484	764
Hydro electric energy	-	-	-	-	-
Renewable resources	-	-	-	-	-
Other	-	-	361	-	361
Sub-total	8	258	375	484	1,125
Environmental issues:					
Air	-	-	90	-	90
Land	-	871	-	-	871
Water	-	760	-	2,512	3,272
Other	-	-	1,290	62	1,352
Sub-total	-	1,631	1,380	2,574	5,585
Health	741	689	2,692	155	4,277
Industrial and economic development:					
Agriculture	263	300	19,063	3,759	23,385
Fisheries	100	210	-	-	310
Forestry	17	1,430	-	-	1,447
Manufacturing	1,197	444	3,417	314	5,372
Minerals	-	1,300	1,108	355	2,763
Other	60	328	1,482	4,800	6,670
Sub-total	1,637	4,012	25,070	9,228	39,947
Social development:					
Culture, sport and recreation	43	508	40	-	591
Education	-	-	-	-	-
Human resources	-	37	-	196	233
Urban and regional studies	-	-	-	-	-
Other	-	-	-	-	-
Sub-total	43	545	40	196	824
Transportation	675	1,755	263	-	2,693
Wildlife	694	-	-	-	694
Other	-	-	-	-	-
Total	3,874	8,890	30,187	12,637	55,588

TABLE 38. Total Expenditures in the Natural Sciences, by Activity and Performing Sector, 1991-92 Estimate

Activity	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Research and development (R&D)							
Current expenditures:							
In-house R&D	1,868	...	...	...	...	...	1,868
R&D contracts	31	1,685	1,102	-	-	50	2,868
R&D grants and contributions	...	6,112	7,971	372	6,005	373	20,833
Research fellowships	-	-	340	-	-	-	340
Admin of extramural R&D programs	1,369	...	...	...	...	...	1,369
Sub-total current R&D	3,268	7,797	9,413	372	6,005	423	27,278
Capital expenditures	80	...	...	...	...	...	80
Total R&D	3,348	7,797	9,413	372	6,005	423	27,358
Related scientific activities (RSA)							
Current expenditures:							
Education support	160	-	-	-	-	-	160
Technical surveys	4,791	2,856	588	-	36	3,681	11,952
Information services	31	255	6	-	-	76	368
Special services and studies	2,148	4,690	150	-	11	19	7,018
Museum services	220	-	-	-	-	-	220
Admin of extramural RSA programs	211	...	...	...	...	...	211
Sub-total current RSA	7,561	7,801	744	-	47	3,776	19,929
Capital expenditures	-	...	...	...	...	...	-
Total RSA	7,561	7,801	744	-	47	3,776	19,929
Total	10,909	15,598	10,157	372	6,052	4,199	47,287

(1) Includes only Provincial Government payments to the SRC.

TABLE 39. Total Expenditures in the Natural Sciences, by Department or Agency and Performing Sector, 1991-92 Estimate

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	330	9,021	6,834	-	30	373	16,588
Economic Diversification & Trade	1,168	1,536	1,060	-	-	-	3,764
Energy and Mines	1,132	205	181	-	-	41	1,559
Environment and Public Safety	1,375	75	-	-	-	75	1,525
Family Foundation	283	-	-	-	-	-	283
Health	719	-	2,038	372	-	-	3,129
Highways and Transportation	2,475	150	30	-	-	50	2,705
Parks and Renewable Resources	2,354	95	4	-	6	-	2,459
Rural Development	70	225	-	-	-	-	295
Vote 35	-	-	-	-	5,975	-	5,975
Sub-total	9,906	11,307	10,147	372	6,011	539	38,282
Agencies:							
Cancer Foundation	430	-	-	-	-	-	430
Sask. Crop Insurance Corp.	232	-	-	-	-	3,075	3,307
Sask. Property Management Corp.	190	2,900	10	-	-	-	3,100
Sask. Water Corporation	151	1,391	-	-	41	585	2,168
Sub-total	1,003	4,291	10	-	41	3,660	9,005
Total	10,909	15,598	10,157	372	6,052	4,199	47,287

(1) Includes only Provincial Government payments to the SRC.

TABLE 40. Total Expenditures in the Natural Sciences, by Department or Agency and Activity, 1991-92 Estimate

Department or agency	Research & development			Related scientific activities							Total
	Current	AEP (1)	Capital	Education support	Technical surveys	Information services	Special services & studies	Museum services	AEP (1)	Capital	
	in thousands of dollars										
Departments:											
Agriculture and Food	12,943	270	-	-	406	-	2,969	-	-	-	16,588
Economic Diversification & Trade	2,215	997	-	-	-	255	126	-	171	-	3,764
Energy and Mines	3	-	-	160	1,274	28	94	-	-	-	1,559
Environment and Public Safety	-	-	-	-	617	75	833	-	-	-	1,525
Family Foundation	63	-	-	-	-	-	-	220	-	-	283
Health	2,351	-	-	-	-	5	773	-	-	-	3,129
Highways and Transportation	810	60	80	-	1,315	5	435	-	-	-	2,705
Parks and Renewable Resources	782	12	-	-	1,665	-	-	-	-	-	2,459
Rural Development	-	-	-	-	-	-	295	-	-	-	295
Vote 35	5,975	-	-	-	-	-	-	-	-	-	5,975
Sub-total	25,142	1,339	80	160	5,277	368	5,525	220	171	-	38,282
Agencies:											
Cancer Foundation	430	-	-	-	-	-	-	-	-	-	430
Sask. Crop Insurance Corp.	7	-	-	-	3,300	-	-	-	-	-	3,307
Sask. Property Management Corp.	330	30	-	-	2,700	-	-	-	40	-	3,100
Sask. Water Corporation	-	-	-	-	675	-	1,493	-	-	-	2,168
Sub-total	767	30	-	-	6,675	-	1,493	-	40	-	9,005
Total	25,909	1,369	80	160	11,952	368	7,018	220	211	-	47,287

(1) Administration of extramural programs

TABLE 41. Total Expenditures on R&D in the Natural Sciences, by Department or Agency and Performing Sector, 1991-92 Estimate

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	270	6,112	6,428	-	30	373	13,213
Economic Diversification & Trade	997	1,155	1,060	-	-	-	3,212
Energy and Mines	1	-	2	-	-	-	3
Environment and Public Safety	-	-	-	-	-	-	-
Family Foundation	63	-	-	-	-	-	63
Health	96	-	1,883	372	-	-	2,351
Highways and Transportation	720	150	30	-	-	50	950
Parks and Renewable Resources	714	80	-	-	-	-	794
Rural Development	-	-	-	-	-	-	-
Vote 35	-	-	-	-	5,975	-	5,975
Sub-total	2,861	7,497	9,403	372	6,005	423	26,561
Agencies:							
Cancer Foundation	430	-	-	-	-	-	430
Sask. Crop Insurance Corp.	7	-	-	-	-	-	7
Sask. Property Management Corp.	50	300	10	-	-	-	360
Sask. Water Corporation	-	-	-	-	-	-	-
Sub-total	487	300	10	-	-	-	797
Total	3,348	7,797	9,413	372	6,005	423	27,358

(1) Includes only Provincial Government payments to the SRC.

TABLE 42. Personnel Engaged in Natural Science Activities, by Department or Agency and Activity, 1991-92 Estimate

Department or agency	Research and development				Related scientific activities			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	-	-	-	-	1	1	-	2
Economic Diversification & Trade	-	-	-	-	-	-	-	-
Energy and Mines	-	-	-	-	13	-	7	20
Environment and Public Safety	-	-	-	-	5	11	-	16
Family Foundation	1	-	-	1	4	1	2	7
Health	-	2	1	3	3	4	1	8
Highways and Transportation	5	4	1	10	7	13	10	30
Parks and Renewable Resources	10	2	2	14	5	29	-	34
Rural Development	-	-	-	-	1	1	-	2
Vote 35	-	-	-	-	-	-	-	-
Sub-total	16	8	4	28	39	60	20	119
Agencies:								
Cancer Foundation	-	16	-	16	-	-	-	-
Sask. Crop Insurance Corp.	-	-	-	-	3	1	2	6
Sask. Property Management Corp.	1	-	-	1	1	2	-	3
Sask. Water Corporation	-	-	-	-	2	-	-	2
Sub-total	1	16	-	17	6	3	2	11
Total	17	24	4	45	45	63	22	130

TABLE 42. Personnel Engaged in Natural Science Activities, by Department or Agency and Activity, 1991-92 Estimate - Concluded

Department or agency	Administration of extramural programs				Total scientific personnel			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	3	3	2	8	4	4	2	10
Economic Diversification & Trade	10	-	4	14	10	-	4	14
Energy and Mines	-	-	-	-	13	-	7	20
Environment and Public Safety	-	-	-	-	5	11	-	16
Family Foundation	-	-	-	-	5	1	2	8
Health	-	-	-	-	3	6	2	11
Highways and Transportation	1	-	-	1	13	17	11	41
Parks and Renewable Resources	-	1	-	1	15	32	2	49
Rural Development	-	-	-	-	1	1	-	2
Vote 35	-	-	-	-	-	-	-	-
Sub-total	14	4	6	24	69	72	30	171
Agencies:								
Cancer Foundation	-	-	-	-	-	16	-	16
Sask. Crop Insurance Corp.	-	-	-	-	3	1	2	6
Sask. Property Management Corp.	1	2	-	3	3	4	-	7
Sask. Water Corporation	-	-	-	-	2	-	-	2
Sub-total	1	2	-	3	8	21	2	31
Total	15	6	6	27	77	93	32	202

TABLE 43. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1991-92 Estimate

Department or agency	Advancement of science	Communications	Energy & fuels					Environmental issues			
			Conservation	Fossil fuels	Hydro electric power	Renewable resources	Other	Air	Land	Water	Other
	in thousands of dollars										
Departments:											
Agriculture and Food	-	-	-	-	-	-	-	-	-	-	-
Economic Diversification & Trade	-	-	-	-	-	-	-	-	-	-	-
Energy and Mines	-	-	-	100	-	-	-	-	-	-	-
Environment and Public Safety	-	-	-	-	-	-	-	-	946	529	50
Family Foundation	63	-	-	-	-	-	-	-	-	-	-
Health	-	-	-	-	-	-	-	-	-	-	-
Highways and Transportation	-	-	-	-	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	-	-	-	-	-	-	-	25	-
Rural Development	-	-	-	-	-	-	-	-	-	7	-
Vote 35	383	-	-	-	-	-	376	-	-	-	1,135
Sub-total	446	-	-	100	-	-	376	-	946	561	1,185
Agencies:											
Cancer Foundation	-	-	-	-	-	-	-	-	-	-	-
Sask. Crop Insurance Corp.	-	-	-	-	-	-	-	-	-	-	-
Sask. Property Management Corp.	-	-	-	-	-	-	-	-	-	-	-
Sask. Water Corporation	-	-	-	-	-	-	-	-	-	2,168	-
Sub-total	-	-	-	-	-	-	-	-	-	2,168	-
Total	446	-	-	100	-	-	376	-	946	2,729	1,185

TABLE 43. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1991-92 Estimate - Continued

Department or agency	Health	Industrial & economic development					
		Agriculture	Fisheries	Forestry	Manufacturing	Minerals	Other
	in thousands of dollars						
Departments:							
Agriculture and Food	-	16,588	-	-	-	-	-
Economic Diversification & Trade	-	-	-	-	3,764	-	-
Energy and Mines	-	-	-	-	-	1,459	-
Environment and Public Safety	-	-	-	-	-	-	-
Family Foundation	-	-	-	-	-	-	-
Health	3,129	-	-	-	-	-	-
Highways and Transportation	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	310	1,447	-	-	-
Rural Development	-	25	-	-	-	-	-
Vote 35	-	776	-	-	836	1,154	1,315
Sub-total	3,129	17,389	310	1,447	4,600	2,613	1,315
Agencies:							
Cancer Foundation	430	-	-	-	-	-	-
Sask. Crop Insurance Corp.	-	3,307	-	-	-	-	-
Sask. Property Management Corp.	-	-	-	-	-	-	3,100
Sask. Water Corporation	-	-	-	-	-	-	-
Sub-total	430	3,307	-	-	-	-	3,100
Total	3,559	20,696	310	1,447	4,600	2,613	4,415

TABLE 43. Objectives of Expenditures in the Natural Sciences, by Department or Agency, 1991-92 Estimate - Concluded

Department or agency	Social development					Transportation	Wildlife	Other	Total
	Culture, sport & recreation	Education	Human resources	Urban & regional studies	Other				
	in thousands of dollars								
Departments:									
Agriculture and Food	-	-	-	-	-	-	-	-	16,588
Economic Diversification & Trade	-	-	-	-	-	-	-	-	3,764
Energy and Mines	-	-	-	-	-	-	-	-	1,559
Environment and Public Safety	-	-	-	-	-	-	-	-	1,525
Family Foundation	220	-	-	-	-	-	-	-	283
Health	-	-	-	-	-	-	-	-	3,129
Highways and Transportation	-	-	-	-	-	2,705	-	-	2,705
Parks and Renewable Resources	122	-	-	-	-	-	555	-	2,459
Rural Development	-	-	-	-	-	263	-	-	295
Vote 35	-	-	-	-	-	-	-	-	5,975
Sub-total	342	-	-	-	-	2,968	555	-	38,282
Agencies:									
Cancer Foundation	-	-	-	-	-	-	-	-	430
Sask. Crop Insurance Corp.	-	-	-	-	-	-	-	-	3,307
Sask. Property Management Corp.	-	-	-	-	-	-	-	-	3,100
Sask. Water Corporation	-	-	-	-	-	-	-	-	2,168
Sub-total	-	-	-	-	-	-	-	-	9,005
Total	342	-	-	-	-	2,968	555	-	47,287

TABLE 44. Objectives of Expenditures in the Natural Sciences, by Activity, 1991-92 Estimate

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Advancement of science	63	-	383	-	446
Communications	-	-	-	-	-
Energy and fuels:	-	-	-	-	-
Conservation	-	-	-	-	-
Fossil fuels	1	35	2	62	100
Hydro electric energy	-	-	-	-	-
Renewable resources	-	-	-	-	-
Other	-	-	376	-	376
Sub-total	1	35	378	62	476
Environmental issues:					
Air	-	-	-	-	-
Land	-	871	-	75	946
Water	-	662	-	2,067	2,729
Other	-	-	1,135	50	1,185
Sub-total	-	1,533	1,135	2,192	4,860
Health	526	623	2,255	155	3,559
Industrial and economic development:					
Agriculture	277	310	13,719	6,390	20,696
Fisheries	100	210	-	-	310
Forestry	17	1,430	-	-	1,447
Manufacturing	997	171	3,051	381	4,600
Minerals	-	1,096	1,154	363	2,613
Other	50	140	1,625	2,600	4,415
Sub-total	1,441	3,357	19,549	9,734	34,081
Social development:					
Culture, sport and recreation	42	220	80	-	342
Education	-	-	-	-	-
Human resources	-	-	-	-	-
Urban and regional studies	-	-	-	-	-
Other	-	-	-	-	-
Sub-total	42	220	80	-	342
Transportation	720	1,793	230	225	2,968
Wildlife	555	-	-	-	555
Other	-	-	-	-	-
Total	3,348	7,561	24,010	12,368	47,287

TABLE 45. Total Expenditures in the Social Sciences and Humanities, by Activity, 1984-85 to 1991-92

Activity	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Research and development (R&D)								
Current expenditures:								
In-house R&D	271	288	398	152	448	166	69	34
R&D contracts	107	85	80	82	329	699	137	15
R&D grants and contributions	298	301	301	398	427	2,154	2,081	2,480
Research fellowships	-	-	-	-	-	51	-	60
Admin of extramural R&D programs	...	...	...	...	35	40	11	11
Sub-total current R&D	676	674	779	632	1,239	3,110	2,298	2,600
Capital expenditures	42	3	-	-	-	-	-	-
Total R&D	718	677	779	632	1,239	3,110	2,298	2,600
Related scientific activities (RSA)								
Current expenditures	15,630	18,423	15,791	8,397	8,514	10,076	12,946	10,318
Admin of extramural RSA programs	...	...	...	28	100	255	140	20
Sub-total current RSA	15,630	18,423	15,791	8,425	8,614	10,331	13,086	10,338
Capital expenditures	588	13	10	-	255	1,893	9	865
Total RSA	16,218	18,436	15,801	8,425	8,869	12,224	13,095	11,203
Total	16,936	19,113	16,580	9,057	10,108	15,334	15,393	13,803

TABLE 46. Total Expenditures in the Social Sciences and Humanities, by Department or Agency, 1984-85 to 1991-92

Department or agency	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Departments:								
Advanced Education and Manpower	1,328	2,538	3,608	...	...	...	...	...
Agriculture and Food	537	995	679	550	579	401	2,592	1,702
Community Services	...	...	...	...	...	...	377	531
Consumer & Commercial Affairs	295	50	40	40	40	40	...	...
Co-operation & Co-operative Development	224	232	132	...	...	...	...	...
Culture, Multiculturalism & Recreation	...	...	...	...	...	1,650	...	...
Culture and Recreation	249	301	340	...	...	...	...	...
Economic Development and Trade	647	756	...	...	...	...	...	...
Economic Development and Tourism	...	...	...	234	753	737	...	...
Economic Diversification and Trade	...	...	...	...	...	...	150	306
Education	200	322	231	725	1,092	3,460	2,848	1,204
Executive Council	538	465	278	194	166	122	57	61
Family Foundation	...	...	...	...	...	...	1,065	659
Finance	1,052	1,132	1,501	1,762	1,676	1,679	2,048	2,048
Future Corporation	...	...	...	...	...	693	...	...
Health	2,685	2,596	1,761	1,584	1,467	3,427	3,892	4,084
Human Resources, Labour & Employment	...	...	...	316	429	800	487	416
Indian & Native Affairs Secretariat	205	307	262	...	...	...	...	...
Justice	1,495	2,226	383	180	135	258	173	175
Labour	212	278	509	...	...	...	...	...
Parks and Renewable Resources	...	...	...	...	...	100	354	256
Parks, Recreation and Culture	...	...	...	359	1,756	...	...	...
Public Service Commission	202	215	112	66	66	125	69	70
Revenue and Financial Services	102	228	373	...	...	...	...	...
Rural Development	67	49	44	39	-	95	...	...
Saskatchewan Library	30	112	148	...	...	...	...	...
Saskatchewan Telephones	...	...	16	...	...	...	...	...
Science and Technology	62	...	310	321	282	232	...	...
Social Services	2,892	3,757	3,220	1,428	383	129	183	70
Supply and Services	1,514	119	55	...	...	...	...	...
Tourism and Small Business	202	136	338	...	...	...	...	...
Urban Affairs	785	415	437	182	128	127	...	...
Women's Secretariat	38	30	24	...	...	...	...	...
Sub-total	15,561	17,259	14,801	7,980	8,952	14,075	14,295	11,582
Agencies:								
Employment Development Agency	...	379	562	...	...	...	...	...
Highway Traffic Board	84	84	...	...	...	...	...	...
Saskatchewan Archives Board	920	1,102	1,023	883	1,027	1,053	1,083	1,898
Sask. Assessment Mgn't Agency	53	55	13	...	...	...	...	...
Sask. Housing Corporation	318	234	181	194	129	206	...	...
Saskatchewan Water Corporation	...	...	...	...	...	...	15	323
Sub-total	1,375	1,854	1,779	1,077	1,156	1,259	1,098	2,221
Total	16,936	19,113	16,580	9,057	10,108	15,334	15,393	13,803

TABLE 47. Total Expenditures in the Social Sciences and Humanities, by Performing Sector, 1984-85 to 1991-92

Performing sector	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Intramural	11,583	11,495	11,110	6,648	7,876	8,878	7,247	7,803
Industry	3,112	5,105	2,831	1,397	1,021	1,903	3,991	1,712
Universities	788	1,879	1,753	612	593	860	1,230	1,222
Hospitals and health organizations	-	-	5	-	58	392	55	60
Saskatchewan Research Council (1)	60	9	-	-	-	143	-	-
Other	1,393	625	881	400	560	3,158	2,870	3,006
Total	16,936	19,113	16,580	9,057	10,108	15,334	15,393	13,803

(1) Includes only Provincial Government payments to SRC.

TABLE 48. Total Expenditures on R&D in the Social Sciences and Humanities, by Performing Sector, 1984-85 to 1991-92

Performing sector	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Intramural	313	291	398	152	483	206	80	45
Industry	107	77	72	80	439	580	171	340
Universities	234	269	299	390	190	499	509	655
Hospitals and health organizations	-	-	-	-	58	-	25	60
Saskatchewan Research Council (1)	37	-	-	-	-	90	-	-
Other	27	40	10	10	69	1,735	1,513	1,500
Total	718	677	779	632	1,239	3,110	2,298	2,600

(1) Includes only Provincial Government payments to SRC.

TABLE 49. Total Expenditures on R&D in the Social Sciences and Humanities, by Department or Agency, 1984-85 to 1991-92

Department or agency	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	in thousands of dollars							
Agriculture and Food	...	...	...	...	76	...	-	-
Community Services	...	...	...	...	...	...	103	191
Culture, Multiculturalism & Recreation	...	...	...	...	...	446	...	...
Culture and Recreation	12	15	120	...	...	...	...	...
Economic Development and Tourism	...	...	...	...	478	535	...	...
Economic Diversification & Trade	...	...	...	...	...	...	53	295
Education	...	...	...	...	63	226	78	34
Executive Council	181	142	80	82	44	...	-	-
Family Foundation	...	...	...	...	...	...	104	-
Finance	...	...	...	...	...	...	-	-
Future Corporation	...	...	...	...	...	75	...	...
Health	352	357	392	283	89	1,738	1,960	2,080
Parks, Recreation and Culture	...	...	...	152	191	...	...	...
Rural Development	...	...	...	...	...	90	...	...
Saskatchewan Library	...	19	74	...	...	...	...	...
Social Services	141	144	113	115	298	...	...	...
Supply and Services	32	...	...	...	...	...	...	...
Sub-total	718	677	779	632	1,239	3,110	2,298	2,600
Total	718	677	779	632	1,239	3,110	2,298	2,600

TABLE 50. Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Activity and Category, 1984-85 to 1991-92

Activity and category	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92(e)
	person-years							
Research and development								
Scientific and professional	5	3	5	3	9	3	2	1
Technical	3	4	3	-	2	-	-	-
Other	1	-	-	-	-	-	-	-
Sub-total R&D personnel	9	7	8	3	11	3	2	1
Related scientific activities								
Scientific and professional	156	192	171	103	96	89	93	90
Technical	13	17	17	13	10	7	13	7
Other	74	78	39	30	34	38	30	38
Sub-total RSA personnel	243	287	227	146	140	134	136	135
Administration of extramural programs								
Scientific and professional	...	...	...	1	2	2	1	1
Technical	...	...	...	...	1	-	-	-
Other	...	...	...	...	-	3	-	-
Sub-total AEP personnel	...	...	...	1	3	5	1	1
Total science activities								
Scientific and professional	161	195	176	107	107	94	96	92
Technical	16	21	20	13	13	7	13	7
Other	75	78	39	30	34	41	30	38
Total scientific personnel	252	294	235	150	154	142	139	137

TABLE 51. Total Expenditures in the Social Sciences and Humanities, by Department or Agency and Source of Funds, 1990-91

Department or agency	Departmental budget	Transfers from other Departments	Transfers from federal government	From trust funds	From other sources	Total
	in thousands of dollars					
Departments:						
Agriculture and Food	2,592	-	-	-	-	2,592
Community Services	377	-	-	-	-	377
Economic Diversification & Trade	150	-	-	-	-	150
Education	2,848	-	-	-	-	2,848
Family Foundation	965	-	-	-	100	1,065
Executive Council	57	-	-	-	-	57
Finance	2,048	-	-	-	-	2,048
Health	3,882	-	10	-	-	3,892
Human Resources,Labour & Employment	487	-	-	-	-	487
Justice	173	-	-	-	-	173
Parks and Renewable Resources	354	-	-	-	-	354
Public Service Commission	69	-	-	-	-	69
Social Services	95	38	50	-	-	183
Sub-total	14,097	38	60	-	100	14,295
Agencies:						
Saskatchewan Archives Board	862	44	37	-	140	1,083
Saskatchewan Water Corporation	8		7	-	-	15
Sub-total	870	44	44	-	140	1,098
Total	14,967	82	104	-	240	15,393

TABLE 52. Total Expenditures in the Social Sciences and Humanities, by Activity and Performing Sector, 1990-91

Activity	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Research and development (R&D)							
Current expenditures:							
In-house R&D	69	...	...	...	...	...	69
R&D contracts	-	103	25	-	-	9	137
R&D grants and contributions	...	68	484	25	-	1,504	2,081
Research fellowships	-	-	-	-	-	-	-
Admin of extramural R&D programs	11	...	...	...	...	...	11
Sub-total current R&D	80	171	509	...	-	1,513	2,298
Capital expenditures	-	...	...	...	...	...	-
Total R&D	80	171	509	25	-	1,513	2,298
Related scientific activities (RSA)							
Current expenditures	7,018	3,820	721	30	-	1,357	12,946
Admin of extramural RSA programs	140	...	...	...	...	...	140
Sub-total current RSA	7,158	3,820	721	30	-	1,357	13,086
Capital expenditures	9	...	...	...	...	...	9
Total RSA	7,167	3,820	721	30	-	1,357	13,095
Total	7,247	3,991	1,230	55	-	2,870	15,393

(1) Includes only Provincial Government payments to SRC.

TABLE 53. Total Expenditures in the Social Sciences and Humanities, by Department or Agency and Performing Sector, 1990-91

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	138	1,154	224	-	-	1,076	2,592
Community Services	265	63	24	25	-	-	377
Economic Diversification & Trade	42	48	39	-	-	21	150
Education	369	2,470	-	-	-	9	2,848
Family Foundation	961	100	-	-	-	4	1,065
Executive Council	-	-	-	-	-	57	57
Finance	2,048	-	-	-	-	-	2,048
Health	1,402	82	878	30	-	1,500	3,892
Human Resources,Labour & Employment	284	-	-	-	-	203	487
Justice	173	-	-	-	-	-	173
Parks and Renewable Resources	354	-	-	-	-	-	354
Public Service Commission	69	-	-	-	-	-	69
Social Services	59	59	65	-	-	-	183
Sub-total	6,164	3,976	1,230	55	-	2,870	14,295
Agencies:							
Saskatchewan Archives Board	1,083	-	-	-	-	-	1,083
Saskatchewan Water Corporation	-	15	-	-	-	-	15
Sub-total	1,083	15	-	-	-	-	1,098
Total	7,247	3,991	1,230	55	-	2,870	15,393

(1) Includes only Provincial Government payments to SRC.

TABLE 54. Total Expenditures in the Social Sciences and Humanities, by Department or Agency and Activity, 1990-91

Department or agency	Research and development			Related scientific activities			Total
	Current	AEP(1)	Capital	Current	AEP(1)	Capital	
	in thousands of dollars						
Departments:							
Agriculture and Food	-	-	-	2,592	-	-	2,592
Community Services	92	11	-	274	-	-	377
Economic Diversification & Trade	53	-	-	77	20	-	150
Education	78	-	-	2,650	120	-	2,848
Family Foundation	104	-	-	961	-	-	1,065
Executive Council	-	-	-	57	-	-	57
Finance	-	-	-	2,048	-	-	2,048
Health	1,960	-	-	1,932	-	-	3,892
Human Resources,Labour & Employment	-	-	-	487	-	-	487
Justice	-	-	-	173	-	-	173
Parks and Renewable Resources	-	-	-	345	-	9	354
Public Service Commission	-	-	-	69	-	-	69
Social Services	-	-	-	183	-	-	183
Sub-total	2,287	11	-	11,848	140	9	14,295
Agencies:							
Saskatchewan Archives Board	-	-	-	1,083	-	-	1,083
Saskatchewan Water Corporation	-	-	-	15	-	-	15
Sub-total	-	-	-	1,098	-	-	1,098
Total	2,287	11	-	12,946	140	9	15,393

(1) Administration of extramural programs

TABLE 55. Total Expenditures on R&D in the Social Sciences and Humanities, by Department or Agency and Performing Sector, 1990-91

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	-	-	-	-	-	-	-
Community Services	11	43	24	25	-	-	103
Economic Diversification & Trade	-	28	25	-	-	-	53
Education	69	-	-	-	-	9	78
Family Foundation	-	100	-	-	-	4	104
Executive Council	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-
Health	-	-	460	-	-	1,500	1,960
Human Resources,Labour & Employment	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	-	-	-	-	-
Public Service Commission	-	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-
Total	80	171	509	25	-	1,513	2,298

(1) Includes only Provincial Government payments to SRC.

TABLE 56. Intramural Expenditures in the Social Sciences and Humanities, by Department or Agency and Type of Expenditure, 1990-91

Department or agency	Current expenditures		Capital expenditures	Total
	Personnel costs	Other costs		
	in thousands of dollars			
Departments:				
Agriculture and Food	138	-	-	138
Community Services	237	28	-	265
Economic Diversification & Trade	40	2	-	42
Education	358	11	-	369
Family Foundation	540	421	-	961
Executive Council	-	-	-	-
Finance	1,741	307	-	2,048
Health	912	490	-	1,402
Human Resources,Labour & Employment	200	84	-	284
Justice	173	-	-	173
Parks and Renewable Resources	222	123	9	354
Public Service Commission	69	-	-	69
Social Services	59	-	-	59
Sub-total	4,689	1,466	9	6,164
Agencies:				
Saskatchewan Archives Board	812	271	-	1,083
Sub-total	812	271	-	1,083
Total	5,501	1,737	9	7,247

TABLE 57. Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Department or Agency and Activity, 1990-91

Department or agency	Research and development				Related scientific activities			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	-	-	-	-	3	2	-	5
Community Services	-	-	-	-	5	-	-	5
Economic Diversification & Trade	-	-	-	-	1	-	-	1
Education	2	-	-	2	4	2	-	6
Family Foundation	-	-	-	-	8	4	4	16
Executive Council	-	-	-	-	-	-	-	-
Finance	-	-	-	-	29	-	6	35
Health	-	-	-	-	18	2	2	22
Human Resources,Labour & Employment	-	-	-	-	4	-	1	5
Justice	-	-	-	-	3	-	-	3
Parks and Renewable Resources	-	-	-	-	2	2	2	6
Public Service Commission	-	-	-	-	1	-	-	1
Social Services	-	-	-	-	1	1	-	2
Sub-total	2	-	-	2	79	13	15	107
Agencies:								
Saskatchewan Archives Board	-	-	-	-	14	-	15	29
Sub-total	-	-	-	-	14	-	15	29
Total	2	-	-	2	93	13	30	136

TABLE 57. Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Department or Agency and Activity, 1990-91 - Concluded

Department or agency	Administration of extramural programs				Total scientific personnel			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	-	-	-	-	3	2	-	5
Community Services	-	-	-	-	5	-	-	5
Economic Diversification & Trade	-	-	-	-	1	-	-	1
Education	1	-	-	1	7	2	-	9
Family Foundation	-	-	-	-	8	4	4	16
Executive Council	-	-	-	-	-	-	-	-
Finance	-	-	-	-	29	-	6	35
Health	-	-	-	-	18	2	2	22
Human Resources,Labour & Employment	-	-	-	-	4	-	1	5
Justice	-	-	-	-	3	-	-	3
Parks and Renewable Resources	-	-	-	-	2	2	2	6
Public Service Commission	-	-	-	-	1	-	-	1
Social Services	-	-	-	-	1	1	-	2
Sub-total	1	-	-	1	82	13	15	110
Agencies:								
Saskatchewan Archives Board	-	-	-	-	14	-	15	29
Sub-total	-	-	-	-	14	-	15	29
Total	1	-	-	1	96	13	30	139

TABLE 58. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1990-91

Department or agency	Advancement of science	Communications	Energy & fuels					Environmental issues			
			Conservation	Fossil fuels	Hydro electric power	Renewable resources	Other	Air	Land	Water	Other
	in thousands of dollars										
Departments:											
Agriculture and Food	-	-	-	-	-	-	-	-	-	-	-
Community Services	-	-	-	-	-	-	-	-	-	-	-
Economic Diversification & Trade	-	-	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-	-	-
Family Foundation	-	-	-	-	-	-	-	-	-	-	-
Executive Council	57	-	-	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-	-	-	-
Health	-	-	-	-	-	-	-	-	-	-	-
Human Resources,Labour & Employment	-	-	-	-	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	-	-	-	-	-	-	-	-	-
Public Service Commission	-	-	-	-	-	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-	-	-	-	-
Sub-total	57	-	-	-	-	-	-	-	-	-	-
Agencies:											
Saskatchewan Archives Board	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan Water Corporation	-	-	-	-	-	-	-	-	-	15	-
Sub-total	-	-	-	-	-	-	-	-	-	15	-
Total	57	-	-	-	-	-	-	-	-	15	-

TABLE 58. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1990-91 - Continued

Department or agency	Health	Industrial & economic development					
		Agriculture	Fisheries	Forestry	Manufacturing	Minerals	Other
	in thousands of dollars						
Departments:							
Agriculture and Food	-	2,592	-	-	-	-	-
Community Services	-	-	-	-	-	-	-
Economic Diversification & Trade	-	-	-	-	-	-	100
Education	-	-	-	-	-	-	-
Family Foundation	-	-	-	-	-	-	-
Executive Council	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-
Health	3,892	-	-	-	-	-	-
Human Resources,Labour & Employment	203	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	-	-	-	-	-
Public Service Commission	-	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-
Sub-total	4,095	2,592	-	-	-	-	100
Agencies:							
Saskatchewan Archives Board	-	-	-	-	-	-	-
Saskatchewan Water Corporation	-	-	-	-	-	-	-
Sub-total	-	-	-	-	-	-	-
Total	4,095	2,592	-	-	-	-	100

TABLE 58. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1990-91 - Concluded

Department or agency	Social development					Transportation	Wildlife	Other	Total
	Culture, sport & recreation	Education	Human resources	Urban & regional studies	Other				
	in thousands of dollars								
Departments:									
Agriculture and Food	-	-	-	-	-	-	-	-	2,592
Community Services	-	-	-	377	-	-	-	-	377
Economic Diversification & Trade	-	-	-	25	-	25	-	-	150
Education	-	2,848	-	-	-	-	-	-	2,848
Family Foundation	911	-	-	-	154	-	-	-	1,065
Executive Council	-	-	-	-	-	-	-	-	57
Finance	-	-	-	-	2,048	-	-	-	2,048
Health	-	-	-	-	-	-	-	-	3,892
Human Resources,Labour & Employment	-	-	284	-	-	-	-	-	487
Justice	-	-	-	-	173	-	-	-	173
Parks and Renewable Resources	45	-	-	-	-	-	309	-	354
Public Service Commission	-	-	69	-	-	-	-	-	69
Social Services	-	-	-	-	183	-	-	-	183
Sub-total	956	2,848	353	402	2,558	25	309	-	14,295
Agencies:									
Saskatchewan Archives Board	1,083	-	-	-	-	-	-	-	1,083
Saskatchewan Water Corporation	-	-	-	-	-	-	-	-	15
Sub-total	1,083	-	-	-	-	-	-	-	1,098
Total	2,039	2,848	353	402	2,558	25	309	-	15,393

TABLE 59. Objectives of Expenditures in the Social Sciences and Humanities, by Activity, 1990-91

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Advancement of science	-	-	-	57	57
Communications	-	-	-	-	-
Energy and fuels:					
Conservation	-	-	-	-	-
Fossil fuels	-	-	-	-	-
Hydro electric energy	-	-	-	-	-
Renewable resources	-	-	-	-	-
Other	-	-	-	-	-
Sub-total	-	-	-	-	-
Environmental issues:					
Air	-	-	-	-	-
Land	-	-	-	-	-
Water	-	-	-	15	15
Other	-	-	-	-	-
Sub-total	-	-	-	15	15
Health	-	1,402	1,960	733	4,095
Industrial and economic development:					
Agriculture	-	138	-	2,454	2,592
Fisheries	-	-	-	-	-
Forestry	-	-	-	-	-
Manufacturing	-	-	-	-	-
Minerals	-	-	-	-	-
Other	-	42	3	55	100
Sub-total	-	180	3	2,509	2,692
Social development:					
Culture, sport and recreation	-	1,939	100	-	2,039
Education	69	300	9	2,470	2,848
Human resources	-	353	-	-	353
Urban and regional studies	11	254	117	20	402
Other	-	2,430	4	124	2,558
Sub-total	80	5,276	230	2,614	8,200
Transportation	-	-	25	-	25
Wildlife	-	309	-	-	309
Other	-	-	-	-	-
Total	80	7,167	2,218	5,928	15,393

TABLE 60. Total Expenditures in the Social Sciences and Humanities, by Activity and Performing Sector, 1991-92 Estimate

Activity	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Research and development (R&D)							
Current expenditures:							
In-house R&D	34	...	...	...	...	...	34
R&D contracts	-	-	15	-	-	-	15
R&D grants and contributions	...	340	580	60	-	1,500	2,480
Research fellowships	-	-	60	-	-	-	60
Admin of extramural R&D programs	11	...	...	...	...	...	11
Sub-total current R&D	45	340	655	60	-	1,500	2,600
Capital expenditures	-	...	...	...	...	...	-
Total R&D	45	340	655	60	-	1,500	2,600
Related scientific activities (RSA)							
Current expenditures	6,873	1,372	567	-	-	1,506	10,318
Admin of extramural RSA programs	20	...	...	...	...	...	20
Sub-total current RSA	6,893	1,372	567	-	-	1,506	10,338
Capital expenditures	865	...	...	...	...	...	865
Total RSA	7,758	1,372	567	-	-	1,506	11,203
Total	7,803	1,712	1,222	60	-	3,006	13,803

(1) Includes only Provincial Government payments to SRC.

TABLE 61. Total Expenditures in the Social Sciences and Humanities, by Department or Agency and Performing Sector, 1991-92 Estimate

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	-	182	282	-	-	1,238	1,702
Community Services	331	80	60	60	-	-	531
Economic Diversification & Trade	-	287	15	-	-	4	306
Education	454	750	-	-	-	-	1,204
Family Foundation	659	-	-	-	-	-	659
Executive Council	-	-	-	-	-	61	61
Finance	2,048	-	-	-	-	-	2,048
Health	1,664	90	830	-	-	1,500	4,084
Human Resources,Labour & Employment	213	-	-	-	-	203	416
Justice	175	-	-	-	-	-	175
Parks and Renewable Resources	256	-	-	-	-	-	256
Public Service Commission	70	-	-	-	-	-	70
Social Services	35	-	35	-	-	-	70
Sub-total	5,905	1,389	1,222	60	-	3,006	11,582
Agencies:							
Saskatchewan Archives Board	1,898	-	-	-	-	-	1,898
Saskatchewan Water Corporation	-	323	-	-	-	-	323
Sub-total	1,898	323	-	-	-	-	2,221
Total	7,803	1,712	1,222	60	-	3,006	13,803

(1) Includes only Provincial Government payments to SRC.

TABLE 62. Total Expenditures in the Social Sciences and Humanities, by Department or Agency and Activity, 1991-92 Estimate

Department or agency	Research and development			Related scientific activities			Total
	Current	AEP(1)	Capital	Current	AEP(1)	Capital	
	in thousands of dollars						
Departments:							
Agriculture and Food	-	-	-	1,702	-	-	1,702
Community Services	180	11	-	340	-	-	531
Economic Diversification & Trade	295	-	-	11	-	-	306
Education	34	-	-	950	20	200	1,204
Family Foundation	-	-	-	659	-	-	659
Executive Council	-	-	-	61	-	-	61
Finance	-	-	-	2,048	-	-	2,048
Health	2,080	-	-	2,004	-	-	4,084
Human Resources,Labour & Employment	-	-	-	416	-	-	416
Justice	-	-	-	175	-	-	175
Parks and Renewable Resources	-	-	-	256	-	-	256
Public Service Commission	-	-	-	70	-	-	70
Social Services	-	-	-	70	-	-	70
Sub-total	2,589	11	-	8,762	20	200	11,582
Agencies:							
Saskatchewan Archives Board	-	-	-	1,233	-	665	1,898
Saskatchewan Water Corporation	-	-	-	323	-	-	323
Sub-total	-	-	-	1,556	-	665	2,221
Total	2,589	11	-	10,318	20	865	13,803

(1) Administration of extramural programs

TABLE 63. Total Expenditures on R&D in the Social Sciences and Humanities, by Department or Agency and Performing Sector, 1991-92 Estimate

Department or agency	Intramural	Industry	Universities	Hospitals and health organizations	Saskatchewan Research Council (1)	Other	Total
	in thousands of dollars						
Departments:							
Agriculture and Food	-	-	-	-	-	-	-
Community Services	11	60	60	60	-	-	191
Economic Diversification & Trade	-	280	15	-	-	-	295
Education	34	-	-	-	-	-	34
Family Foundation	-	-	-	-	-	-	-
Executive Council	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-
Health	-	-	580	-	-	1,500	2,080
Human Resources,Labour & Employment	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	-	-	-	-	-
Public Service Commission	-	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-
Total	45	340	655	60	-	1,500	2,600

(1) Includes only Provincial Government payments to SRC.

TABLE 64. Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Department or Agency and Activity, 1991-92 Estimate

Department or agency	Research and development				Related scientific activities			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	-	-	-	-	-	-	-	-
Community Services	-	-	-	-	6	-	-	6
Economic Diversification & Trade	-	-	-	-	-	-	-	-
Education	1	-	-	1	4	2	1	7
Family Foundation	-	-	-	-	8	1	3	12
Executive Council	-	-	-	-	-	-	-	-
Finance	-	-	-	-	28	-	6	34
Health	-	-	-	-	18	3	2	23
Human Resources,Labour & Employment	-	-	-	-	4	-	1	5
Justice	-	-	-	-	3	-	-	3
Parks and Renewable Resources	-	-	-	-	2	1	2	5
Public Service Commission	-	-	-	-	1	-	-	1
Social Services	-	-	-	-	1	-	-	1
Sub-total	1	-	-	1	75	7	15	97
Agencies:								
Saskatchewan Archives Board	-	-	-	-	15	-	23	38
Sub-total	-	-	-	-	15	-	23	38
Total	1	-	-	1	90	7	38	135

TABLE 64. Personnel Engaged in Scientific Activities in the Social Sciences and Humanities, by Department or Agency and Activity, 1991-92 Estimate - Concluded

Department or agency	Administration of extramural programs				Total scientific personnel			
	Scientific and professional	Technical	Other	Total	Scientific and professional	Technical	Other	Total
	person-years							
Departments:								
Agriculture and Food	-	-	-	-	-	-	-	-
Community Services	-	-	-	-	6	-	-	6
Economic Diversification & Trade	-	-	-	-	-	-	-	-
Education	1	-	-	1	6	2	1	9
Family Foundation	-	-	-	-	8	1	3	12
Executive Council	-	-	-	-	-	-	-	-
Finance	-	-	-	-	28	-	6	34
Health	-	-	-	-	18	3	2	23
Human Resources,Labour & Employment	-	-	-	-	4	-	1	5
Justice	-	-	-	-	3	-	-	3
Parks and Renewable Resources	-	-	-	-	2	1	2	5
Public Service Commission	-	-	-	-	1	-	-	1
Social Services	-	-	-	-	1	-	-	1
Sub-total	1	-	-	1	77	7	15	99
Agencies:								
Saskatchewan Archives Board	-	-	-	-	15	-	23	38
Sub-total	-	-	-	-	15	-	23	38
Total	1	-	-	1	92	7	38	137

TABLE 65. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1991-92 Estimate

Department or agency	Advancement of science	Communications	Energy & fuels					Environmental issues			
			Conservation	Fossil fuels	Hydro electric power	Renewable resources	Other	Air	Land	Water	Other
	in thousands of dollars										
Departments:											
Agriculture and Food	-	-	-	-	-	-	-	-	-	-	-
Community Services	-	-	-	-	-	-	-	-	-	-	-
Economic Diversification & Trade	-	-	-	-	-	-	-	-	-	-	-
Education	-	-	-	-	-	-	-	-	-	-	-
Family Foundation	-	-	-	-	-	-	-	-	-	-	-
Executive Council	61	-	-	-	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-	-	-	-	-
Health	-	-	-	-	-	-	-	-	-	-	-
Human Resources,Labour & Employment	-	-	-	-	-	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	-	-	-	-	-	-	-	-	-
Public Service Commission	-	-	-	-	-	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-	-	-	-	-
Sub-total	61	-	-	-	-	-	-	-	-	-	-
Agencies:											
Saskatchewan Archives Board	-	-	-	-	-	-	-	-	-	-	-
Saskatchewan Water Corporation	-	-	-	-	-	-	-	-	-	111	-
Sub-total	-	-	-	-	-	-	-	-	-	111	-
Total	61	-	-	-	-	-	-	-	-	111	-

TABLE 65. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1991-92 Estimate - Continued

Department or agency	Health	Industrial & economic development					
		Agriculture	Fisheries	Forestry	Manufacturing	Minerals	Other
	in thousands of dollars						
Departments:							
Agriculture and Food	-	1,702	-	-	-	-	-
Community Services	-	-	-	-	-	-	-
Economic Diversification & Trade	-	7	-	-	280	-	19
Education	-	-	-	-	-	-	-
Family Foundation	-	-	-	-	-	-	-
Executive Council	-	-	-	-	-	-	-
Finance	-	-	-	-	-	-	-
Health	4,084	-	-	-	-	-	-
Human Resources,Labour & Employment	203	-	-	-	-	-	-
Justice	-	-	-	-	-	-	-
Parks and Renewable Resources	-	-	-	-	-	-	-
Public Service Commission	-	-	-	-	-	-	-
Social Services	-	-	-	-	-	-	-
Sub-total	4,287	1,709	-	-	280	-	19
Agencies:							
Saskatchewan Archives Board	-	-	-	-	-	-	-
Saskatchewan Water Corporation	-	212	-	-	-	-	-
Sub-total	-	212	-	-	-	-	-
Total	4,287	1,921	-	-	280	-	19

TABLE 65. Objectives of Expenditures in the Social Sciences and Humanities, by Department or Agency, 1991-92 Estimate - Concluded

Department or agency	Social development					Transportation	Wildlife	Other	Total
	Culture, sport & recreation	Education	Human resources	Urban & regional studies	Other				
	in thousands of dollars								
Departments:									
Agriculture and Food	-	-	-	-	-	-	-	-	1,702
Community Services	-	-	-	531	-	-	-	-	531
Economic Diversification & Trade	-	-	-	-	-	-	-	-	306
Education	-	1,204	-	-	-	-	-	-	1,204
Family Foundation	359	-	-	-	300	-	-	-	659
Executive Council	-	-	-	-	-	-	-	-	61
Finance	-	-	-	-	2,048	-	-	-	2,048
Health	-	-	-	-	-	-	-	-	4,084
Human Resources,Labour & Employment	-	-	213	-	-	-	-	-	416
Justice	-	-	-	-	175	-	-	-	175
Parks and Renewable Resources	36	-	-	-	-	-	220	-	256
Public Service Commission	-	-	70	-	-	-	-	-	70
Social Services	-	-	-	-	70	-	-	-	70
Sub-total	395	1,204	283	531	2,593	-	220	-	11,582
Agencies:									
Saskatchewan Archives Board	1,898	-	-	-	-	-	-	-	1,898
Saskatchewan Water Corporation	-	-	-	-	-	-	-	-	323
Sub-total	1,898	-	-	-	-	-	-	-	2,221
Total	2,293	1,204	283	531	2,593	-	220	-	13,803

TABLE 66. Objectives of Expenditures in the Social Sciences and Humanities, by Activity, 1991-92 Estimate

Objective	Intramural		Extramural		Total
	Research and development	Related scientific activities	Research and development	Related scientific activities	
	in thousands of dollars				
Advancement of science	-	-	-	61	61
Communications	-	-	-	-	-
Energy and fuels:	-	-	-	-	-
Conservation	-	-	-	-	-
Fossil fuels	-	-	-	-	-
Hydro electric energy	-	-	-	-	-
Renewable resources	-	-	-	-	-
Other	-	-	-	-	-
Sub-total	-	-	-	-	-
Environmental issues:					
Air	-	-	-	-	-
Land	-	-	-	-	-
Water	-	-	-	111	111
Other	-	-	-	111	111
Sub-total	-	-	-	543	4,287
Health	-	1,664	2,080	1,921	1,921
Industrial and economic development:				-	-
Agriculture	-	-	-	-	-
Fisheries	-	-	-	-	280
Forestry	-	-	280	-	-
Manufacturing	-	-	-	-	19
Minerals	-	-	15	4	2,220
Other	-	-	295	1,925	2,293
Sub-total	-	-	-	-	1,204
Social development:		2,293	-	750	283
Culture, sport and recreation	-	420	-	-	531
Education	34	283	-	20	2,593
Human resources	-	320	180	35	6,904
Urban and regional studies	11	2,558	-	805	-
Other	-	5,874	180	-	220
Sub-total	45	-	-	-	-
Transportation	-	220	-	-	
Wildlife	-	-	-	-	
Other	-				
Total	45	7,758	2,555	3,445	13,803

APPENDIX

RESPONDENTS

The following Departments and Agencies were involved in scientific activities in the province of Saskatchewan in 1990-91. The coordinator listed is the person in each Department or Agency who assisted us in gathering the statistics. We wish to thank the coordinators, as well as those assisting in the amalgamation of data, for their time and efforts in providing us with these statistics.

Agriculture and Food: Co-ordinator: Connie Lambert Tel. 787-5168

Agriculture and Food reports both natural and social sciences expenditures. Work in the natural sciences is focussed mainly on research, development, analysis and resolution of various agricultural problems and yield improvement requirements. Activities in the social sciences are carried out by the Communications Branch and deal with ADF Communications and the development of a long-range plan for the horse racing industry.

Cancer Foundation: Co-ordinator: Valerie J. Lusk Tel. 585-1831

Research and development is performed by the Physics and Medical Services departments of the Foundation. Activities in both departments relate to the development of improvements in cancer treatment. Physics research is aimed at developing improvements in treatment planning, patient positioning, automation and computer control of the treatment process. Medical research is in the area of cell biology and tissue culture.

Community Services: Co-ordinator: Robin Woodward Tel. 787-7288
Riaz Ahmed Tel. 787-8746

This department represents the amalgamation of the Saskatchewan Housing Corporation and Urban Affairs.

Economic Diversification and Trade: Co-ordinator: Royal Hinther Tel. 933-7209

The Policy Development Branch supports both R&D and RSA in the social sciences. Extramural activities relate primarily to industrial, economic and tourism development. The Science and Technology Division formerly the Department of Science and Technology reports natural science expenditures.

Education: Co-ordinator: Linda Smith Tel. 787-5896

Several branches within the department are engaged in R&D and RSA: Policy and Planning, Information Resources Management, Student Financial Assistance, Instructional Resources, and Policy and Client Services.

Energy and Mines: Co-ordinator: Kathy Thiele Tel. 787-7662

Natural science activities are carried out by Geology and Mines, and the Energy Branch. Geology and Mines' geological survey provides an ongoing regional geoscientific database of the bedrock geology and mineral resources of the province. This database promotes economic development, particularly exploration for and development of minerals, petroleum and natural gas, and assists environmental studies. The Energy Branch coordinates provincial R&D activities, advising the government on energy R&D policy matters.

Environment and Public Safety: Co-ordinator: Todd Degelman Tel. 787-9643

Natural science activities are carried out through the following branches: Air and Land Protection, Water Quality, Environment Assessment, Mine Pollution, Strategic Planning and Building Standards. These branches support both R&D and RSA activities. Included are such projects as: water quality assessment, assessment of technical information on environmental impact studies, and a study of recycling/reuse of toxic substances.

Executive Council: Co-ordinator: Bonita Heidt Tel. 787-6351

The Council supports RSA in the social sciences through the Intergovernmental Affairs Branch and the Policy Secretariat, with extramural payments.

Family Foundation: Co-ordinator: Gillian McCreary Tel. 787-5577

This department represents the amalgamation of Culture, Multiculturalism and Recreation department and Consumer and Commercial Affairs department. Scientific expenditures were reported in both natural and social sciences.

Finance: Co-ordinator: John Law 787-6780

The intramural research activities of the Department of Finance center around economic analysis and policy research related to resource allocation, taxation and investment, legislation and some marketing activities.

Health: Co-ordinator: Wayne Fritz Tel. 787-3153

The organization and agencies included in this report are: Policy and Health Economics Branch, Saskatchewan Alcohol and Drug Abuse Commission, Medical Care Insurance Branch, Mental Health Services Branch and the Saskatchewan Health Research Board. The Policy and Health Economics Branch, provides technical and support services for studies, supports basic and clinical research, studies investigating changes in utilization of health care services, develops a client information system, provides general information services on medical care, and conducts statistical studies regarding the utilization of mental health services. The Health Research Board supports university-based researchers.

Highways and Transportation: Co-ordinator: Dr. P.M. Pearson Tel. 787-4866

Scientific expenditures in the natural sciences are carried out by the Technical Research Branch, Geotechnical & Materials Testing Branch, Transportation Systems Branch, Transportation Policy Branch and the Design & Traffic Safety Branch. A number of studies and programs are performed intramurally and extramurally. Included are projects such as: test track improvements, studies on rutting, pavement temperature deflection, recycling agents in Sandvik operations, soil suction, and bearing capacity.

Human Resources, Labour & Employment: Co-ordinator: Nick Grainger Tel. 787-2401

Labour Relations, Occupational Health & Safety, Support Services, Labour Standards, Employment Opportunities, and Pension Benefits are the units included in this year's social science report. Their related scientific activities include: the review of the Labour Standards Act, the Occupational Health and Safety Act and the Pension Benefits Act; and a building accessibility survey.

Justice: Co-ordinator: B.A. Pottruff Tel. 787-8954

Policy, Planning and Evaluation Branch is involved in policy development within the department of Justice.

Parks and Renewable Resources: Co-ordinator: David Tulloch Tel. 787-1283

Natural science activities are carried out by four major branches: Parks, Fisheries, Forest Fire Management, Forestry Inventory. Almost ninety-eight percent of the activities were carried out intramurally. Social science expenditures are reported by Parks Branch and Wildlife Branch who perform all of their expenditures intramurally.

Public Service Commission: Co-ordinator: Lorraine Redshaw Tel. 787-5609

Social science activities are carried out by the Employee Relations and Compensation Division, the Classification Division and the Staff Development Division.

Rural Development: Co-ordinator: Gloria Parisien Tel. 787-5692

In the natural science activities, the Transportation Planning Branch conducts traffic volume studies, and provides a road inventory required in planning and assessing roadway needs.

Saskatchewan Archives Board: Co-ordinator: Trevor Powell Tel. 787-4066

Under The Archives Act, the Saskatchewan Archives Board is responsible for appraising, acquiring, preserving, arranging, describing, making accessible and encouraging the use of documentary records in all media from both official and private sources bearing on all aspects of the history of Saskatchewan. With the exception of the reference section all sections are principally engaged in archival services. During 1990-91 the annual grant from the Government of Saskatchewan remained at $862,500.00 Grants were also received from the Official Language Office, Department of Education for the Fransaskois project, from the Canadian Council of Archives for some backlog reduction projects and from the National Archives of Canada for cataloguing CBC materials. The City of Regina and the City of Saskatoon provide yearly grants to the Saskatchewan Archives Board which in turn hires staff and purchases archival supplies to operate an archival service in both centres.

Saskatchewan Crop Insurance Corporation: Co-ordinator: Keith Hayward Tel. 728-7240

The Planning and Development Division conducts the following natural science related scientific activities: Yield Survey - used to collect average yield information on various crops on an area basis; Rainfall Reports - monthly rainfall records, used to help predict forage yields; New Crops - research on the history and properties of crops not insured at the present time; Soil Class Review; Geographic Information System; and Remote Sensing.

Saskatchewan Property Management Corporation: Co-ordinator: Bruce Bishop Tel. 787-0242

In the natural sciences, the Central Survey and Mapping Agency includes 4 branches that report R&D and RSA: Geodetic Survey Branch, Topographic Mapping Branch, Data Management Branch, and the Cadastral Mapping Branch. The Central Survey and Mapping Agency is primarily the developer and manager of the basic Geographic Information Systems. The Agency investigates, evaluates, develops and implements advanced technology systems.

Saskatchewan Water Corporation: Co-ordinator: Dave Schiman Tel. 694-3915

The Resource Management unit reports intramural and extramural expenditures. Projects include: information gathering on Soils-Water-Wetlands, and preparation of data books and reports on the Dam Safety Program.

Social Services: Co-ordinator: Casey DesChamp Tel. 787-3583

The intramural social science activities include: a survey of the effects of employment programs for Social Assistance Recipients, and evaluation proposed for Family Sexual Abuse Treatment Project. Extramural activities are directed towards a survey of social assistance recipients and towards development and implementation of evaluation research for a Family Sexual Abuse Treatment Project.

INDICATORS OF PROVINCIAL SCIENTIFIC ACTIVITIES

1. Economic Indicators

Province	Population January 1991 (1)		Provincial Gross Domestic Product per capita 1989 (1)		Gross Domestic Expenditures on Research and Development, 1989 (2)		Provincial GERD/PGDP 1989-90	
	in thousands	rank	dollars	rank	in millions of $	rank	percent	rank
Newfoundland.....	573	9	14,670	10	88	9	1.0	5
Prince Edward Island .	130	10	14,592	9	14	10	0.7	9
Nova Scotia.....	898	7	17,839	7	191	6	1.2	3
New Brunswick	726	8	17,417	8	146	8	1.2	4
Québec	6,812	2	22,284	4	2,193	2	1.4	2
Ontario	9,840	1	27,780	1	4,495	1	1.6	1
Manitoba	1,093	5	21,487	5	216	5	0.9	8
Saskatchewan	995	6	19,709	6	185	7	0.9	6
Alberta	2,501	4	26,555	2	621	3	0.9	7
British Columbia	3,186	3	23,959	3	562	4	0.7	10
Canada(3)	26,833		24,330		8,718		1.3	

(1) Canadian Economic Observer, Statistics Canada, Catalogue No. 11-010, July 1991.
(2) Science Statistics, Catalogue No. 88-001, Vol. 15, No. 4, August 1991.
(3) Includes the Yukon and the Northwest Territories.

2. Total Budget and Scientific Expenditures of the Federal Government and the Provincial Governments, 1989-90

Province	Total Budget (1)	Scientific Expenditures (2)	Percentage
	in millions of $		percent
Federal Government:			
Canada	142,703.0	5,066.6	3.6
Provincial Governments:			
Newfoundland	2,747.3	33.1	1.2
Nova Scotia	3,753.5	48.8	1.3
New Brunswick	3,501.3	24.6	0.7
Québec	32,733.3	559.9	1.7
Ontario	41,653.7	477.1	1.1
Manitoba	4,937.3	35.7	0.7
Saskatchewan	4,309.5	58.6	1.4
Alberta	10,700.2	247.3	2.3
British Columbia	13,902.0	156.8	1.1

(1) Taken from Budgetary Estimates of the Federal Government and of the Provincial Governments.
(2) Services, Science & Technology Division, Statistics Canada.

3. Higher Education

Province	Total research and development expenditures in the higher education sector, 1989-90 (1)			Sponsored research in universities, 1989-90(2)		
	in millions of $	$ per capita	rank	in millions of $	$ per capita	rank
Newfoundland	41	72	7	20	35	7
Prince Edward Island	3	23	10	1	8	10
Nova Scotia	66	74	6	45	50	3
New Brunswick	31	43	9	18	25	9
Québec	627	92	2	385	57	1
Ontario	861	88	4	484	49	4
Manitoba	90	82	5	47	43	5
Saskatchewan	91	92	3	39	39	6
Alberta	237	95	1	127	51	2
British Columbia	167	52	8	108	34	8
Canada	2,214	83		1,274	48	

(1) "Estimation of Research and Development Expenditures in the Higher Education Sector, 1989-90", Services, Science and Technology Division, Statistics Canada, August 1991, ST-91-02.
(2) Financial Statistics of Universities and Colleges, 1989-90, Report 2.1A, Canadian Association of University Business Officers.

4. Industry

Province	Value added by manufacturing industries per capita, 1988 (1)		Current intramural industrial R&D expenditures per employee in primary and secondary industry, 1989 (2)	
	dollars	rank	dollars	rank
Newfoundland	1,483	8	64	10
Prince Edward Island	1,152	10	77	9
Nova Scotia	2,096	7	162	7
New Brunswick	2,909	4	431	5
Québec	5,048	2	1,198	2
Ontario	7,058	1	1,641	1
Manitoba	2,761	5	206	6
Saskatchewan	1,347	9	146	8
Alberta	2,711	6	475	3
British Columbia	3,704	3	457	4
Canada (3)	4,912		1,073	

(1) Manufacturing Industries of Canada; National and Provincial Areas, 1988, Statistics Canada, Catalogue No. 31-203.
(2) Results of 1989 Industrial R & D survey, Services, Science and Technology Division, Statistics Canada and Labour Force Information, July, 1991, Statistics Canada, Catalogue No. 71-001P.
(3) Includes the Yukon and Northwest Territories.

5. Federal Government

Province	Total intramural expenditures on scientific activities 1989-90 (1)	Total Federal scientific personnel 1989-90 (2)	Total extramural payments on scientific activities 1989-90 (1)
	in millions of $	person-years	in millions of $
Newfoundland	65	579	25
Prince Edward Island	9	129	5
Nova Scotia	148	1,610	60
New Brunswick	43	599	28
Québec	385	4,612	511
Ontario	1,688	20,833	683
Manitoba	104	1,639	53
Saskatchewan	60	761	36
Alberta	129	1,505	117
British Columbia	144	1,720	176
Canada (3)	2,801	34,187	1,697

(1) Science Statistics, Catalogue No. 88-001, Vol. 15, No. 6, September 1991.
(2) Science Statistics, Catalogue No. 88-001, Vol. 15, No. 8, November 1991.
(3) Includes the Yukon and Northwest Territories.

6. Provincial Government

Province	Total provincial expenditure on scientific activities, 1989-90 (1)			Total scientific expenditures of Provincial Research Organizations, 1990 (2)	
	in millions of $	$ per capita	rank	in millions of $	rank
Newfoundland	33.1	58	4	...	
Nova Scotia	48.8	54	5	7.7	7
New Brunswick	24.6	34	8	14.7	5
Québec	559.9(p)	82	2	35.2	2
Ontario	477.1	48	7	32.0	3
Manitoba	35.7	33	9	6.1	8
Saskatchewan	58.6	59	3	18.7	4
Alberta	247.3	99	1	56.2	1
British Columbia	156.8	49	6	12.8	6
Total	1,641.9(3)	61		183.3	

(1) "Scientific and Technological Activities of Provincial Governments, 1984-85 to 1990-91", Services, Science and Technology Division, Statistics Canada.
(2) Science Statistics, Catalogue No. 88-001, Vol. 15, No. 9, December 1991.
(3) Does not include scientific activities of the provincial governments of Prince Edward Island nor the Yukon and Northwest Territories.

7. Gross Domestic Expenditures on R&D in Canada, by Performing Sector, by Province, 1989 (1).

Province	Federal government	Provincial government	Provincial research organization	Total government	Industry	University	Private non-profit	All sectors
			in millions of $					
Newfoundland.....	33	4	-	37	10	41	-	88
Prince Edward Island .	8	-	-	8	2	4	-	14
Nova Scotia	83	6	2	91	33	66	1	191
New Brunswick	30	2	2	34	79	31	2	146
Québec	159	62	20	241	1,280	627	45	2,193
Ontario	835	77	14	926	2,643	861	65	4,495
Manitoba	76	1	2	79	43	89	5	216
Saskatchewan	44	3	7	54	39	92	-	185
Alberta	75	24	34	133	252	236	-	621
British Columbia	85	19	4	108	279	167	8	562
Canada (2)	1,428	198	85	1,711	4,667	2,214	126	8,718

(1) "Estimates of Canadian Research and Development Expenditures (GERD), National 1963 to 1991, and by Province 1979 to 1989", Services, Science and Technology Division, Statistics Canada, August 1991, ST-91-01.
(2) Includes the Yukon and Northwest Territories.

8. Gross Domestic Expenditures on R&D in Canada, by Funding Sector, by Province, 1989(1)

Province	Federal government	Provincial government	Provincial research organization	Total government	Industry	University	Private non-profit	All sectors (3)
			in millions of $					
Newfoundland	53	6	-	59	7	21	-	88
Prince Edward Island	11	-	-	11	1	2	-	14
Nova Scotia	124	11	-	135	28	21	4	191
New Brunswick	52	6	-	58	74	13	-	146
Québec	487	207	1	695	1,103	235	47	2,193
Ontario	1,311	210	-	1,521	1,865	386	83	4,495
Manitoba	108	9	-	117	39	43	10	216
Saskatchewan	69	24	-	93	34	52	3	185
Alberta	147	99	1	247	228	110	13	621
British Columbia	190	41	-	231	235	59	14	562
Canada(2)	2,552	613	2	3,167	3,621	942	174	8,718

(1) "Estimates of Canadian Research and Development Expenditures (GERD), National 1963 to 1991, and by Province 1979 to 1989", Services, Science and Technology Division, Statistics Canada, August 1991, ST-91-01.
(2) Includes the Yukon and Northwest Territories.
(3) Includes Foreign sources of funds.

9. Gross Domestic Expenditures on R&D in Saskatchewan, 1989(1)

Funding sector	Performing sector							
	Governments				Business enterprise	Higher education	Private non-profit	Total
	Federal	Provincial	Sask Research Council	Total				
	in millions of $							
Governments								
Federal	44	-	1	45	4	20	-	69
Provincial	-	3	4	7	3	14	-	24
Sask Research Council	-	-	-	-	-	-	-	-
Sub-total	44	3	5	52	7	34	-	93
Business enterprise	-	-	2	2	30	2	-	34
Higher education	-	-	-	-	-	52	-	52
Private non-profit	-	-	-	-	-	3	-	3
Foreign	-	-	-	-	2	1	-	3
Total	44	3	7	54	39	92	-	185

(1) "Estimates of Canadian Research and Development Expenditures (GERD), National 1963 to 1991, and by Province 1979 to 1989", Services, Science and Technology Division, Statistics Canada, August 1991, ST-91-01.

10. Federal Government Grants and Contracts to Industry for R&D in the Natural Sciences, by Selected Departments\Programs and Region, 1989-90(1)

Department\Program	NFLD	PEI	NS	NB	QUÉ	ONT	MAN	SASK	ALTA	BC	CANADA(2)
					in millions of $						
A. R&D grants:											
Industry, Science and Technology:											
Industrial and Regional Development Program.....	-	-	7.0	10.3	14.6	-	-	-	-	31.9	
Defence Industry Productivity Program.....	-	-	1.2	-	92.1	35.4	0.1	-	0.2	2.9	132.0
Other.....	0.1	-	0.3	-	13.2	8.6	0.3	0.1	0.3	1.7	24.4
Sub-total.....	0.1	-	1.5	7.0	115.6	58.6	0.4	0.1	0.5	4.6	188.3
National Research Council:											
Industrial Research Assistance Program.....	1.1	1.0	1.5	1.5	12.4	25.8	2.2	1.5	3.5	6.2	56.8
Other.....	0.6	0.1	0.6	0.3	2.6	6.0	--	0.1	1.2	1.0	12.7
Sub-total.....	1.7	1.1	2.1	1.8	15.0	31.8	2.2	1.6	4.7	7.2	69.5
Other.....	2.0	0.5	6.8	2.2	18.9	20.2	2.4	3.6	8.2	8.9	73.8
Total.....	**3.8**	**1.6**	**10.4**	**11.0**	**149.5**	**110.6**	**5.0**	**5.3**	**13.4**	**20.7**	**331.6**
B. R&D Contracts:											
Canadian Space Agency.....	-	-	-	-	16.4	55.1	-	3.0	0.1	1.2	75.8
National Defence.....	0.4	-	4.9	-	11.8	65.2	4.6	-	2.1	6.0	95.1
National Research Council.....	0.4	0.1	--	-	0.2	0.7	0.1	-	--	-	1.6
Supply and Services.....	0.4	-	1.2	-	1.2	4.5	-	0.1	0.1	2.8	10.3
Other.....	0.9	0.1	3.0	1.1	13.8	30.8	2.1	1.5	4.4	5.3	62.9
Total.....	**2.1**	**0.2**	**9.1**	**1.1**	**43.4**	**156.3**	**6.8**	**4.6**	**6.7**	**15.3**	**245.7**
Total, grants and contracts.....	**5.9**	**1.8**	**19.5**	**12.0**	**192.9**	**266.9**	**11.9**	**9.9**	**20.2**	**36.0**	**577.3**

(1) Science Statistics, Catalogue No. 88-001, Vol. 15, No. 6, September 1991.
(2) Includes the Yukon and Northwest Territories.

The data expressed here are regional representations and will not correspond to Canada aggregates shown in other Statistics Canada publications. Total may not add due to rounding.

11. Federal Government Expenditures on Scientific Activities in the Natural Sciences, by Province and Selected Departments, 1989-90(1)

Province	Agriculture	Energy, Mines and Resources	Environment	Industry Science and Technology	National Defence	National Research Council	Natural Sciences and Engineering Research Council	Other	Total
				in millions of $					
Newfoundland.....	2	1	5	-	1	14	7	49	79
Prince Edward Island....	9	1	1	-	-	2	-	1	14
Nova Scotia.....	12	18	18	4	28	12	13	79	184
New Brunswick.....	9	2	9	7	--	3	6	31	67
Québec.....	35	26	55	119	55	53	85	245	673
Ontario.....	134	220	163	83	137	279	172	553	1,741
Manitoba.....	27	1	19	1	5	7	11	70	141
Saskatchewan.....	26	4	17	--	--	15	12	14	88
Alberta.....	33	41	36	1	18	6	32	57	224
British Columbia.....	20	18	3	36	20	44	47	104	292
Canada(2).....	308	341	368	222	264	435	385	1,202	3,525

(1) "Provincial Distribution of Federal Expenditures on Science and Technology, 1989-90", Services, Science and Technology Division, Statistics Canada, November 1991, ST-91-03.
(2) Includes the Yukon and Northwest Territories.

12. Federal Government Intramural Expenditures on Scientific Activities in the Natural Sciences by Province and Selected Departments, 1989-90(1)

Province	Agriculture	Atomic Energy of Canada Ltd	Energy Mines and Resources	Environment	Fisheries and Oceans	National Defence	National Research Council	Other	Total
				in millions of $					
Newfoundland.....	2	-	-	4	37	-	11	5	59
Prince Edward Island....	8	-	-	1	--	-	--	-	9
Nova Scotia.....	10	-	16	18	54	23	9	-	130
New Brunswick.....	9	-	-	9	15	-	--	8	41
Québec.....	32	-	4	55	20	41	36	46	234
Ontario.....	131	84	200	155	27	62	242	255	1,156
Manitoba.....	26	36	-	19	10	-	4	1	96
Saskatchewan.....	23	-	3	16	-	-	13	1	56
Alberta.....	33	-	32	35	-	15	1	6	122
British Columbia.....	19	-	14	31	40	12	8	11	135
Canada(2).....	293	120	278	355	204	153	324	332	2,059

(1) "Provincial Distribution of Federal Expenditures on Science and Technology, 1989-90", Services, Science and Technology Division, Statistics Canada, November 1991, ST-91-03
(2) Includes the Yukon and Northwest Territories.

13. Federal Government Intramural Expenditures on R&D in the Natural Sciences, by Province and Selected Departments, 1989-90(1)

Province	Agriculture	Atomic Energy of Canada Ltd	Energy Mines and Resources	Environment	Fisheries and Oceans	National Defence	National Research Council	Other	Total
				in millions of $					
Newfoundland	2	-	-	--	14	-	10	4	30
Prince Edward Island	7	-	-	--	--	-	-	-	8
Nova Scotia	10	-	4	1	33	23	8	--	78
New Brunswick	9	-	-	2	8	-	-	8	27
Québec	32	-	1	6	12	41	28	19	139
Ontario	107	78	79	38	10	60	213	146	731
Manitoba	23	34	-	2	10	-	3	--	71
Saskatchewan	22	-	-	8	-	-	10	1	41
Alberta	31	-	16	3	-	15	--	5	70
British Columbia	19	-	5	1	29	12	6	7	79
Canada (2)	262	112	105	61	116	151	278	189	1,274

(1) "Provincial Distribution of Federal Expenditures on Science and Technology, 1989-90", Services, Science and Technology Division, Statistics Canada, November 1991, ST-91-03
(2) Includes the Yukon and Northwest Territories.

14. Federal Government Personnel Engaged in Scientific Activities in the Natural Sciences, by Province and Selected Departments, 1989-90(1)

Province	Agriculture	Atomic Energy of Canada Ltd	Energy Mines and Resources	Environment	Fisheries and Oceans	National Defence	National Research Council	Other	Total
				person-years					
Newfoundland	32	-	-	73	255	-	67	66	493
Prince Edward Island	104	-	-	12	8	-	1	-	125
Nova Scotia	135	-	136	196	564	200	91	14	1,336
New Brunswick	141	-	-	101	178	-	3	145	568
Québec	416	-	16	575	196	614	351	670	2,838
Ontario	1,621	1,751	2,323	1,389	313	713	2,531	3,120	13,761
Manitoba	356	751	-	249	144	-	31	18	1,549
Saskatchewan	357	-	6	202	-	-	136	5	706
Alberta	480	-	204	431	-	194	5	98	1,412
British Columbia	257	-	78	362	466	140	104	180	1,587
Canada(2)	3,899	2,502	2,782	3,716	2,124	1,861	3,320	4,324	24,528

(1) "Provincial Distribution of Federal Expenditures on Science and Technology, 1989-90", Services, Science and Technology Division, Statistics Canada, November 1991, ST-91-03
(2) Includes the Yukon and Northwest Territories.

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Mr. Stephen Battah
Federal/Provincial Agreement Planner
Science and Technology
Department of Commerce and Technology
P.O. Box 6000
Fredericton, New Brunswick
E3B 5H1 Tel.: (506) 453-2489

Mr. S. Mookerjee
Technology Policy Branch
Ministry of Industry, Trade and Technology
Hearst Block, 900 Bay Street
6th Floor, Queen's Park
Toronto, Ontario
M7A 2E1 Tel.: (416) 325-6822

Mr. R. Minther
Technology Consultant
Saskatchewan Economic Diversification and Trade
206, 15 Innovation Blvd.,
Saskatoon, Saskatchewan
S7N 2X8 Tel.: (306) 933-7209

Mr. M. Cornell
Technology Consultant, Industrial Technology Branch
Manitoba Industry, Trade and Tourism
155 Carlton Street, Room 500
Winnipeg, Manitoba
R3C 3H8 Tel.: (204) 945-0126

Mr. P. Dober
Director, Statistical Services Branch
Department of Industry, Trade and Technology
P.O. Box 519, 1800 Argyle Street
Halifax, Nova Scotia
B3J 2R7 Tel.: (902) 424-5691

Dr. P. Noden
Director, Research Planning
Department of Technology, Research and Telecommunication
12th Floor, Pacific Plaza
10909 Jasper Avenue
Edmonton, Alberta
T5J 3M8 Tel.: (403) 422-0561

Dr. T. Padmore
Director, Policy and Planning Branch
Ministry of Advanced Education, Training and Technology
2nd Floor, 1022 Government Street
Victoria, British Columbia
V8W 1X7 Tel.: (604) 387-2034

Ms. J. Woodman
Development Officer
Technology Development Division
Department of Development
P.O. Box 8700
St. John's, Newfoundland
A1B 4J6 Tel.: (709) 729-5662

M. S. Bernier / Mme C. Charron
Bureau de la statistique du Québec
117, rue St-André, 4ième étage
Québec, Québec
G1K 3Y3 Tel.: (418) 643-5118

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